

# Geography and Oceanography BSC (Hons)

## **COURSE DETAILS**

- A level requirements: <u>ABB</u>
- UCAS code: FF78
- Study mode: Full-time

# Length: 3 years

# **KEY DATES**

- Apply by: <u>31 January 2024</u>
- Starts: 23 September 2024

# **Course overview**

Our Geography and Oceanography BSc (Hons) programme explores how the Earth behaves as a result of interactions between the land, the oceans, and the atmosphere. If you're interested in understanding complex issues such as climate change, rising sea levels, and environmental pollution, this is the course for you.

# INTRODUCTION

Complex issues such as climate change, sea-level rise, and environmental pollution can only be fully understood if all the different facets of the Earth's behaviour are considered. While the ocean sciences aspect deals with present-day and future climate change scenarios, the link to physical geography provides an understanding of changes in climate over the last several thousand years to provide context for recent climate change.

Your training will cover core topics in oceanography, physical geography, geology, and ecology as well as modules in IT and communication skills. There will be the opportunity to participate in fieldwork throughout your studies, as well as a full sea practical during your final year.

Fieldwork is carried out in a range of locations, ranging from inner city to coastal and mountainous environments. This includes local coastal waters and other locations across the UK.

Liverpool was the first UK university programme to combine land, ocean, and climate studies in one integrated programme of study. Our links with the campus-based National Oceanography Centre provide guest lectures and supervision of projects from their scientists. A number of the School's degree programmes involve laboratory and field work. Fieldwork is carried out in various locations, ranging from inner city to coastal and mountainous environments. We consider applications from prospective disabled students on the same basis as all other students, and reasonable adjustments will be considered to address barriers to access.

## WHAT YOU'LL LEARN

- Accredited by the Institute of Marine Engineering, Science and Technology
- Guest lectures and project supervision from scientists at National Oceanography Centre (NOC)
- Lectures and assignments are regularly updated with the latest research
- Fieldwork opportunities in local and UK waters
- Paid summer internships are offered working alongside academics at the University, NOC, or elsewhere

• Students without mathematics, physics or chemistry at A level are provided with remedial courses

# ACCREDITATION

This course is accredited by the Institute of Marine Engineering, Science and Technology.

# **Course content**

Discover what you'll learn, what you'll study, and how you'll be taught and assessed.

# YEAR ONE

The required modules in year one provide grounding in ocean science and physical geography, as well as developing essential and transferable skills that are required throughout your degree programme. Optional modules allow you to focus on areas of environmental sciences that interest you.

ENVS117 is a compulsory module for those without A2 level maths or similar. Students with A level maths must choose either ENVS117 or PHYS107. ENVS153 is a compulsory module for those without A or AS level in chemistry.

# **COMPULSORY MODULES**

## CLIMATE, ATMOSPHERE AND OCEANS (ENVS111)

## Credits: 15 / Semester: semester 1

Climate, Atmosphere and Oceans provides an understanding of how the climate system operates. The module draws on basic scientific principles to understand how climate has evolved over the history of the planet and how the climate system is operating now. Attention is particularly paid to the structure and circulation of the atmosphere and ocean, and how they both interact. The course emphasises acquiring mechanistic insight and drawing upon order of magnitude calculations. By the end of the module students will understand how the oceans and atmosphere combine to shape Earth's climate. Students gain quantitative skills by completing a series of coursework exercises and a final exam. Students address the Net Zero carbon goal via group work involving digital storytelling.

## EXPERIMENTS IN PHYSICAL GEOGRAPHY (ENVS120)

## Credits: 15 / Semester: semester 1

The module uses laboratory experiments to allow students to gain first-hand experience of some fundamental physical, biological and chemical processes underlying physical geography, aimed primarily at interactions between people and their physical environment. It is designed to provide a foundation for environmental modules in the second and third years. This module comprises multiple whole-day practical sessions, each designed to give students first-hand experience of a topic important in understanding our changing environment. Dedicated computer practicals are also run to provide training in use of EXCEL, MINITAB, and basic inferential statistics. Students get formal feedback in each assessed week (one poster per group). However, perhaps most valuable is the feedback obtained informally via discussions during the sessions.

#### MARINE ECOSYSTEMS: DIVERSITY, PROCESSES AND THREATS (ENVS122)

#### Credits: 15 / Semester: semester 2

This module is designed to deliver an introduction to the diversity of marine ecosystems across the globe. Each week during in person lectures you will be introduced to a new ecosystem and will learn about this habitat, specifically the main organisms, key processes, and human threats to each ecosystem described and explored. Central to this module are interactive discussion sessions (workshops) that will build an understanding of how marine ecosystems are expected to respond to the human-induced changes of the anthropocene. During these workshops you will learn to critique a piece of scientific research in small group discussions guided by academics. Your knowledge and understanding will be assessed via open-book online tests, and a group project in which you will create an infographic outlining the threats a particular ecosystem faces.

## STUDY SKILLS (OCEAN AND CLIMATE SCIENCES) (ENVS103)

#### Credits: 15 / Semester: whole session

This module is designed to introduce students to key concepts and skills in ocean and climate sciences, for instance key software tools for data analysis and illustration, laboratory skills, and fieldwork experience. Students will also develop more generic skills, particularly in communication through essay writing, technical reports, and oral and poster presentations. This will involve both individual and teamwork and will help students develop time management skills. The module also introduces students to academic integrity and shows students how to access scientific literature and how to use bibliographic software. All students are assigned to a tutorial group with one of the academic staff as their tutor. Teaching is carried out both to the whole year group and also during tutorial group meetings. The module is assessed via a series of coursework assignments.

## THEORY AND LABORATORY EXPERIMENTS IN EARTH SURFACES PROCESSES (ENVS165)

## Credits: 15 / Semester: semester 2

The module uses a lecture and laboratory-based problem-solving approach to explore some of the fundamental physical and chemical processes underlying physical geography. It is designed to provide a foundation for environmental and physical geography modules in the second and third year. This module comprises multiple whole-day practical sessions, each designed to give students first-hand experience of a topic important in understanding our changing environment. Students get formal feedback in each assessed week (one poster per group). However, perhaps most valuable is the feedback obtained informally via discussions during the sessions.

## **OPTIONAL MODULES**

## **ECOLOGY AND CONSERVATION (ENVS157)**

#### Credits: 15 / Semester: semester 2

The zone of life on earth, or the 'biosphere', is a highly dynamic system responding to external pressures including changing human activities. The biosphere obeys a numbers of simple natural principles, but these often interact to create complex and sometimes unexpected responses. Using a wide range of examples we will explore these interactions between organisms and the environment. We will examine how species organise into communities, and how energy and other resources flow through ecosystems. We will explore how ecosystems respond to change, including gradual environmental shifts, sudden disturbance events and the effects of human activities. We will also learn how the key principles of ecology can be applied to conservation. We will also look towards the future of ecosystems, including whether we can restore degraded habitats, and recreate "natural" landscapes.

## **ENVIRONMENTAL CHEMISTRY (ENVS153)**

#### Credits: 15 / Semester: semester 2

This module will give students an understanding of the fundamental properties of elements and matter, either solid, liquid or gas, in the context of the environmental sciences. It will introduce the fundamentals of atomic structure, elements and molecules from simple inorganic to large organic ones and the bonding forces that hold them together. It will look at the basics of chemical reactions such as the processes of oxidation and reduction, the solubility of solids and gases in water and acid-base properties. Students will learn how to make quantitative predictions, for instance on the amount of products that will be produced based on balanced chemical reactions, and will see how basic chemistry can be used to explain many environmental properties. The module is taught through lectures, tutorial sessions and online formative quizzes with automated feedback. Assessment is through online tests and an open book final exam. This module is largely an introduction to chemistry and might therefore not be well suited for students who did A-level chemistry or equivalent.

## ESSENTIAL MATHEMATICAL SKILLS (ENVS117)

#### Credits: 15 / Semester: semester 1

This module is designed to provide students without a A-Level GCE level (or equivalent) background in mathematics a foundation to their degree programme. The module covers pure maths, maths mechanics and statistics developing the required knowledge and skills to be able complete degree programmes in Ocean Sciences, Earth Sciences, Geography, Environmental Science and Marine Biology. The module is taught as weekly lectures following a ten-chapter book developed for the module by world leading experts in the fields. Lectures are supplemented with workshops where concepts can be discussed and skills improved. The module is assessed though online pop-quizzes and a formal written exam.

## MATHEMATICS FOR PHYSICISTS I (PHYS107)

#### Credits: 15 / Semester: semester 1

This module aims to provide all students with a common foundation in mathematics, necessary for studying the physical sciences and maths courses in later semesters. All topics will begin "from the ground up" by revising ideas which may be familiar from A-level before building on these concepts. In particular, the basic principles of differentiation and integration will be practised, before extending to functions of more than one variable. Basic matrix manipulation will be covered as well as vector algebra and an understanding of eigenvectors and eigenvalues.

## INTRODUCTION TO CLIMATE CHANGE AND MITIGATION (ENVS189)

#### Credits: 15 / Semester: semester 2

This module will introduce you to the concept of Earth System interactions as a framework for understanding the causes and consequences of climate change. The module will cover the key features of the earth, atmosphere and ocean, and their interactions. alongside the drivers and consequences for perturbing part of the Earth System. Past, contemporary and projections of climate change will be discussed, as well as the toolkit tools deployed by environmental scientists to detect climate change and show attribute it to be a consequence of human activities. The module will discuss also measures to mitigate against climate change, drawing on the United Nations Framework Convention on Climate Change (UNFCC) efforts .

Programme details and modules listed are illustrative only and subject to change.

# YEAR TWO

Modules in year two will develop more specialist skills and knowledge in ocean sciences and physical geography. Optional modules provide further opportunities to focus on topics of environmental sciences that interest you.

## **COMPULSORY MODULES**

### **CHANGING ENVIRONMENTS (ENVS214)**

#### Credits: 15 / Semester: semester 1

The Earth is subject to a myriad of threats and stresses, ranging from a changing global climate to unprecedented scales of human impacts on ecosystems, so that a new geological time period, the Anthropocene was created. Placing future change in freshwater and coastal wetlands and lakes into a long-term context is a critical science, and without it, society cannot constrain the 'natural' baseline against which future changes could be judged. This module will provide a critical insight into the global changes currently impacting the Earth over decades to millennial timescales. We will introduce a series of contemporary environmental concerns, and teach how we can reconstruct climatic and environmental conditions, the landscapes and vegetation of the past. We will explore a wide variety of archives (lakes, freshwater and coastal wetlands, oceans) and develop an understanding of the key techniques used to trace environmental conditions (physical properties, biogeochemistry, biological indicators). We will assess how the drivers behind these changes will affect future landscapes and ecosystems.

## CLIMATOLOGY (ENVS231)

#### Credits: 15 / Semester: semester 2

The module covers energy balance and transfer processes at the surface, clouds, rain formation, weather forecasting, monsoons, tropical cyclones, weather in the mid latitudes, and the regional climates. The module has a balance between theory, processes, impacts, and hands-on experimentation and data analysis.

## GEOMORPHOLOGY: ICE, SEA AND AIR (ENVS252)

## Credits: 15 / Semester: semester 2

The module develops an understanding of these major geomorphic systems and how they create terrestrial landforms. It explores the basic processes that have helped shaping the geomorphology of Britain and investigates magnitude and frequency of events, as well as time and space scales over which the processes operate.

The module is divided into four components, each composed of 4 sessions: glacial systems, glacial geomorphology and environmental change, aeolian processes, and coastal geomorphology . Weekly face-to-face sessions are supported by access to online videos, power point presentations, lecture notes, reading lists and some selected web sites. Weekly timetabled sessions will be a combination of lectures, discussions around reading and Q&A. Two days of fieldwork form the basis of the summative assessment addressing set problems and questions. A formative GIS exercise is also delivered via timetabled support sessions.

#### **KEY SKILLS FOR ENVIRONMENTAL DATA ANALYSIS (ENVS202)**

#### Credits: 15 / Semester: semester 1

The module provides a generic training in manipulating environmental data sets using the industry-standard Matlab software. Skills are provided in reading in data, manipulating and plotting the data, and interpreting the data signals. The assumption is that students have little or no experience in programming. The module begins with an introduction to Matlab – what it is, what it can do, how to operate it – and then develops a series of programming skills, each week using data collected in the staffs' own research to provide real-world examples of the use of Matlab. The aim is to provide students with sufficient grasp of programming in Matlab to enable its use in subsequent project work, as well as providing the foundations in one of the key tools used in science and industry.

## SAMPLING THE OCEAN (ENVS220)

#### Credits: 15 / Semester: semester 2

This module provides some of the fundamental skills required for surveying and sampling the ocean, either for research or for commercial environmental surveying work. The module covers the methods and skills used in oceanography for navigation and survey design, the measurement of physical parameters such as temperature, salinity and currents, and the measurement of biogeochemical parameters such as nutrients, phytoplankton and dissolved oxygen. Students are taught the importance of assessing data quality and instrument calibration, metadata and data banking. Laboratory work develops skills in the analyses for key oceanographic parameters (e.g. salinity, chlorophyll, dissolved oxygen and nutrients), and computer laboratories develop skills in sensor calibration, data quality control and data analysis. The module components are all relevant to the subsequent planning and sampling as part of the ENVS349 Sea Practical. Assessment is by two pieces of coursework.

## OCEANOGRAPHY, PLANKTON AND CLIMATE (ENVS245)

#### Credits: 15 / Semester: semester 1

The tiny plankton are the base of marine food chains and also affect the Earth's climate. If you want to understand how and where these organisms live in the ocean, you need to step out of your own experience as a terrestrial animal and learn how the physics, biology and chemistry of the ocean come together to control the lives of plankton. In this module we will get you to think about how turbulence and stratification in the ocean control the growth of different sizes of plants and animals by determining how they can acquire light, nutrients and food. You will learn how plankton play a key role in shaping Earth's climate, but that this depends on the plankton species and plankton size. We will also consider how plankton respond to changes in Earth's climate, with important shifts in species distributions currently being caused by our warming climate. In this module we take you from the micron scales of the tiniest plankton up to the scale of the global ocean to illustrate the fundamental links between the ocean's physical and biogeochemical processes, plankton communities and Earth's climate. Teaching is structured around a series of short videos on key topics and concepts, with class work then looking at relevant case studies, discussing some of the important implications of our changing climate on plankton, and gaining practice in quantifying plankton responses to changes in their ocean environment. Assessment is by one coursework assignment halfway through the semester, and an online open-book exam.

#### **RESEARCH AND CAREER SKILLS (ENVS204)**

#### Credits: 15 / Semester: whole session

This module aims to develop research and careers skills required by marine biologists, ocean scientists and environmental scientists as they prepare for their final year of study. These aims are achieved through blended learning approach including: interactive tutorials, workshops, and the School of Environmental Sciences careers week. Students will focus on developing skills in critiquing and reading the scientific literature, assessed through a literature review essay. Students will also be introduced to the process of scientific research, learning how to analyse and synthesise real scientific data, create professional display items and write a research report, which is assessed, in standard scientific format. Students will develop knowledge of careers in their field and enhance their employability taking part in an assessment centre exercise and job video interview, which is assessed.

## **OPTIONAL MODULES**

## **CATCHMENT HYDROLOGY (ENVS217)**

#### Credits: 15 / Semester: semester 1

The study of catchment hydrology is concerned with water above and below the land surface, its various forms, and its circulation and distribution in time and space within drainage catchments; it is based on fundamental knowledge of the hydrological cycle and its governing factors. Understanding the hydrological cycle is fundamental to physical geography. All life is supported by water and all earth systems incorporate fluxes of water to some extent. The module covers the main hydrological processes operating in drainage catchments in terms of their measurement, operation and controlling factors. The module provide 'hands-on' experience of both observing hydrology and modelling hydrological systems, with an emphasis on applied learning, which might be useful in a vocational sense in the future. The module will aim to deliver excellent training in the knowledge required to work in a wide variety of environmentally-facing careers, including those with the EA, Natural England or DEFRA, as well as Environmental Consultancies.

#### MARINE POLLUTION (ENVS232)

#### Credits: 15 / Semester: semester 2

Students are taught how marine systems are changing due to globally increasing water temperatures and increasing carbon dioxide concentrations in the atmosphere, which are affecting the chemistry, physics and ultimately biology of the marine systems at unprecedented rates. These changes are expected to accelerate in the coming decades. Localised anthropogenic stressors such as excess nutrients, plastic debris, trace metals (e.g. mercury, copper), marine heatwaves and/or other emerging contaminants affecting coastal and open ocean waters are covered. Students will gain an understanding of the causes and processes that drive marine pollution issues as well as techniques used to monitor, remediate and/or regulate those issues. Assessment is done through group work, coursework and a final in-person exam.

Programme details and modules listed are illustrative only and subject to change.

## **YEAR THREE**

Year three provides the opportunity to conduct an independent research project in oceanography/geography and to engage in sampling activities at sea during a three-day research cruise. Optional modules are available in physical geography, oceanography and environmental sciences.

## **COMPULSORY MODULES**

## CONTEMPORARY ISSUES IN OCEAN AND CLIMATE SCIENCES (ENVS366)

#### Credits: 15 / Semester: semester 2

This research-led module aims to promote interest, awareness and understanding of current important research topics within Ocean and Climate Sciences. It also aims to develop generic skills such as team working and communication skills. The module considers recent reports such as the IPCC (Intergovernmental Panel on Climate Change) and the associated 2019 SROCC (Special Report on Oceans and Cryosphere in a Changing Climate), with students working with one of the lead IPCC authors based in Liverpool. Students will also attend the bi-weekly Ocean and Climate Sciences research seminars that are given by invited national and international experts on a range of subjects related to the marine and climate system. Assessment is by individual oral presentations by students presenting what they have learnt from recent research papers of particular interest to them, and a group presentation on a research topic of current importance (e.g. as highlighted in the latest SROCC report). A final in-person exam is focused around a recent high-impact scientific paper provided to the students.

## SEA PRACTICAL (ENVS349)

## Credits: 30 / Semester: semester 1

Measurements made at sea are a key activity in oceanographic research. This module introduces the collection of data and samples including navigation, meteorological parameters, temperature and salinity, currents, dissolved oxygen, nutrients, chlorophyll and plankton. We will use the Field Studies Council Site at Millport in Scotland, where students will gain experience of sampling at sea and use skills developed in the second year to calibrate and analyse their data. Laboratory work, analysing water samples for nutrients and plankton, will take place in Millport and in the Central Teaching Laboratories in Liverpool. The Sea Practical introduces students to the way in which professional ocean scientists work in both research and commercial surveying. It involves collecting data and samples at sea, analysing samples in the laboratory, processing and analysing data using computer software, assessing, and reporting on the data and its quality, and finally presenting the methods, results and interpretation in an accurate and comprehensive report. By following professional ways of working, it provides students with both subject-specific and generic employability skills. Research integrity is an integral component of this module. The module is assessed by a group presentation on components of the data analysis and quality, a record and laboratory book, and a scientific report/paper addressing a key question arising from the data collected off Millport.

## INDEPENDENT RESEARCH PROJECT (ENVS306)

#### Credits: 30 / Semester: whole session

This module consists of a two-semester dissertation research project, carried out individually by a student with supervision by a member of academic staff. Projects can be field-, laboratory- or desk-based studies on a predefined project and the student will learn about project design, data collection, analysis and interpretation of results.

## **OPTIONAL MODULES**

#### **GEOGRAPHIC DATA SCIENCE (ENVS363)**

#### Credits: 15 / Semester: semester 1

This module will introduce students to the nascent field of Geographic Data Science (GDS), a discipline established at the intersection between Geographic Information Science (GIS) and Data Science. The course covers how the modern GIS toolkit can be integrated with Data Science tools to solve practical real-world problems. Core to the set of employable skills to be taught in this course is an introduction to programming tools for GDS in R and Python. The programme of lectures, guided practical classes and independent study illustrate how and why GDS is useful for social science applications.

## GLOBAL CARBON CYCLE (ENVS335)

#### Credits: 15 / Semester: semester 2

Increasing amounts of carbon dioxide in the atmosphere are having a profound impact on our Earth system. This module will introduce students to the fundamental theory behind the global carbon cycle. Students will see how carbon is partitioned between the atmosphere, land and ocean in the contemporary and past Earth system, understand how the ocean stores 50 times more carbon than the atmosphere, and consider the impact of increasing carbon dioxide on the organisms living on land and in the ocean. Teaching is through lectures, workshops focusing on key components of the carbon cycle, and guided reading. Assessment is by two pieces of coursework.

## INTRODUCTION TO QUATERNARY MICROPALAEONTOLOGY (ENVS342)

#### Credits: 15 / Semester: semester 2

This module intends to give a holistic insight of a number of marine and terrestrial microfossils that are conventionally used for reconstructing past environmental conditions for the Quaternary period, including recent past. Microfossils are biological indicators that can help to either qualitatively and/or quantitatively estimate environmental conditions such as atmospheric temperature and precipitation (pollen), sea-surface conditions (foraminifera, diatoms, radiolarians, dinoflagellate cysts), salinity (ostracods, diatom), pH (diatoms), sea-ice cover (diatoms, dinoflagellate cysts), etc. These conditions are of paramount importance for modelling past climate models, which in turn, are essential to forecast future climate. In addition, microfossil assemblages help to understand the natural evolution of our environment as well as measuring the amplitude of human activities over time.

## **OCEAN DYNAMICS (ENVS332)**

#### Credits: 15 / Semester: semester 1

Ocean dynamics addresses how the ocean and atmosphere circulate. Fundamental questions are addressed, such as how heat, salt, and dissolved substances are transported, how jets and weather systems emerge on our planet, why there are western boundary currents in the ocean, and how seafloor topography shapes the ocean circulation. Students will improve their understanding of how the ocean and atmosphere behave, including comparing the importance of different physical processes in the climate system. The module is delivered via lectures and formative workshops to gain skills at problem solving. There is significant mathematical content, requiring familiarity with calculus and algebra. The module is assessed through two online tests and an essay.

## FLUVIAL ENVIRONMENTS (ENVS372)

#### Credits: 15 / Semester: semester 2

Fluvial processes are found all over the world and are some of the most important in sculpting the Earth's surface and producing landforms. This module examines fundamental concepts and recent ideas relating to fluvial geomorphology, building on study throughout your educational career. A key point about studying fluvial environments is to understand how the system functions, its links and interactions. It is important to look at all the main components of the system, to understand the dynamics and controls on water and sediment flux and how these produce different types of landforms. The amounts of water and sediment can vary with the environmental conditions and thus study of the drivers of these systems such as climate and human activities and how they have changed over time is essential for being able to interpret the current landscape. Understanding of the present functioning of fluvial systems is essential for any environmental management since rain and runoff are ubiquitous and floods are a major natural hazard.

#### COASTAL ENVIRONMENTS: SPATIAL AND TEMPORAL CHANGE (ENVS376)

#### Credits: 15 / Semester: semester 1

This module considers the evolution and response of coastal environments to marine and riverine processes and their variations in relation to past, present and future climate change. Attention is given to physical processes and inter-relationships acting along coastlines and coastal changes in response to sea level rise, variations in storms activity, wave climate and sediment supply. Consideration is also given to coastal management and climate change adaptation and mitigation measures. Topics will be investigated through a combination of lectures, field trips and development of a project aimed at identifying optimum coastal protection schemes for real case studies.

## CARBON, NUTRIENTS AND CLIMATE CHANGE MITIGATION (ENVS381)

#### Credits: 15 / Semester: semester 1

The module will involve both individual and group work, workshops, group presentations/debates, and engagement with the most current scientific literature and social media and science communication. This module is open to all students, but those taking this module must be willing to engage in quantitative analyses of carbon and nutrient cycling and its importance to climate mitigation strategies.

Programme details and modules listed are illustrative only and subject to change.

# HOW YOU'LL LEARN

Teaching takes place through lectures, practicals, workshops, seminars, tutorials and computer based learning, with an emphasis on learning through doing. The award-winning £23 million Central Teaching Laboratories provides a state-of-the-art facility for undergraduate practical work.

Students value the learning opportunities provided by field classes, including the rapid feedback on performance. You will typically receive at least 15 hours of formal teaching each week. Between 30 and 100 hours of fieldwork and hands-on activities are provided each year depending on the discipline.

A typical module might involve two or three one-hour lectures each week, and often a threehour laboratory or computer-based practical as well. Tutorials typically involve groups of 4-7 students meeting with a member of staff at least every two weeks in year one and two. In year three, you will undertake an honours project, which is a piece of independent research (field, laboratory, or data analysis) on a topic of your choice, supervised by a member of staff. In years three and four students meet with their project supervisor on a weekly or more frequent basis. As you progress through your degree, you will be increasingly challenged to engage with current debates, think critically, and study independently.

A number of the School's degree programmes involve laboratory and fieldwork. The fieldwork is carried out in various locations, ranging from inner city to coastal and mountainous environments. We consider applications from prospective students with disabilities on the same basis as all other students, and reasonable adjustments will be considered to address barriers to access.

# HOW YOU'RE ASSESSED

Assessment matches the learning objectives for each module and may take the form of written exams, coursework submissions in the form of essays, scientific papers, briefing notes or lab/field notebooks, oral and poster presentations and contributions to group projects.

# LIVERPOOL HALLMARKS

We have a distinctive approach to education, the Liverpool Curriculum Framework, which focuses on research-connected teaching, active learning, and authentic assessment to ensure our students graduate as digitally fluent and confident global citizens.

# **Careers and employability**

Geography is a subject that bridges the social and physical sciences. Those studying geography develop transferable knowledge and skills which open up a wide range of career opportunities.

By the time you graduate you will have developed core research skills in human geography, including surveying, interviewing and innovative community liaison techniques stand students in good stead for a range of employment destinations.

You can explore the following work experience opportunities:

- Internships during the course of their degree.
- Work-based dissertation which combines the final year independent research project with a placement in industry.

Students can also continue their studies at postgraduate level and PhD study with opportunities to apply for funding from a range of organisations, including the ESRC (Economic and Social Research Council) and NERC (Natural Environment Research Council).raphy is a subject that bridges the social and physical sciences. Those studying geography develop transferable knowledge and skills which open up a wide range of career opportunities.

By the time you graduate you will have developed core research skills in human geography, including surveying, interviewing and innovative community liaison techniques stand students in good stead for a range of employment destinations.

# WORK EXPERIENCE OPPORTUNITIES

We encourage students to undertake work experience and internships during the course of their degree. Our students can also select a work-based dissertation, which combines the final year independent research project with a placement in industry.

Students can also continue their studies at postgraduate level and PhD study with opportunities to apply for funding from a range of organisations, including the ESRC (Economic and Social Research Council) and NERC (Natural Environment Research Council).

# **Fees and funding**

Your tuition fees, funding your studies, and other costs to consider.

# **TUITION FEES**

UK fees (applies to Channel Islands, Isle of Man and Republic of Ireland)	
Full-time place, per year	£9,250
	·

International fees	
Full-time place, per year	£27,200

Fees are correct for the academic year 2024/25

Tuition fees cover the cost of your teaching and assessment, operating facilities such as libraries, IT equipment, and access to academic and personal support. <u>Learn more about</u> <u>tuition fees, funding and student finance</u>.

# **ADDITIONAL COSTS**

We understand that budgeting for your time at university is important, and we want to make sure you understand any course-related costs that are not covered by your tuition fee. This includes the cost of a lab coat, food and drink during compulsory field courses, and dissertation expenses.

Find out more about the additional study costs that may apply to this course.

# **SCHOLARSHIPS AND BURSARIES**

We offer a range of scholarships and bursaries to provide tuition fee discounts and help with living expenses while at university.

Check out our <u>Undergraduate Global Advancement Scholarship</u>. This offers a tuition fee discount of up to £5,000 for eligible students starting an undergraduate degree from September 2024. There's also <u>the Liverpool Bursary</u> which is worth £2,000 per year for eligible students.

# **Entry requirements**

The qualifications and exam results you'll need to apply for this course.

Your qualification	Requirements About our typical entry requirements
A levels	ABB including two science subjects (acceptable science subjects: Mathematics, Further Mathematics, Physics, Chemistry, Biology, Geology, Geography, Applied Science, Environmental Science, Psychology, Marine Science) Applicants with the Extended Project Qualification (EPQ) are
	eligible for a reduction in grade requirements. For this course, the offer is <b>BBB</b> with <b>A</b> in the EPQ including two sciences.
	You may automatically qualify for reduced entry requirements through our <u>contextual offers scheme</u> .
	If you don't meet the entry requirements, you may be able to complete a foundation year which would allow you to progress to this course.
	Available foundation years:
	<ul> <li><u>Earth Sciences entry route leading to BSc (Hons) (4 year</u> route including a Foundation Year at Carmel College)</li> <li><u>Geography BSc (Hons) (4 year route including a foundation</u> year at Carmel College) BSc (Hons)</li> </ul>
GCSE	4/C in English and 4/C in Mathematics
Subject requirements	Including two sciences. Acceptable sciences: Mathematics, Further Mathematics, Physics, Chemistry, Biology, Geology, Geography, Applied Science, Environmental Science, Psychology, Marine Science.
	For applicants from England: For science A levels that include the separately graded practical endorsement, a "Pass" is required.
International Baccalaureate	33 points including 5 at Higher Level in two science subjects,

Your qualification	Requirements About our typical entry requirements
	no score below 4.
Irish Leaving Certificate	H1, H2, H2, H2, H3, H3 including H2 or above in two sciences
Scottish Higher/Advanced Higher	Not accepted without Advanced Highers at ABB including two sciences
Welsh Baccalaureate Advanced	Accepted at Grade B with AB at two science A levels
Access	Applications considered. 45 Level 3 credits in graded units, including 30 at Distinction and a further 15 with at least Merit. 15 Distinctions are required in each of two sciences. GCSE Mathematics and English grade C / 4 also required
International qualifications	Many countries have a different education system to that of the UK, meaning your qualifications may not meet our entry requirements. Completing your Foundation Certificate, such as that offered by the <u>University of Liverpool International</u> <u>College</u> , means you're guaranteed a place on your chosen course.

# **ALTERNATIVE ENTRY REQUIREMENTS**

- If your qualification isn't listed here, or you're taking a combination of qualifications, <u>contact us</u> for advice
- <u>Applications from mature students</u> are welcome.



© University of Liverpool – a member of the Russell Group

Generated: 12 Oct 2023, 12:22