
Ulster University
SCHOOL OF GEOGRAPHY AND ENVIRONMENTAL SCIENCES
UNDERGRADUATE DEGREES
MAKE A DIFFERENCE

"Our students have the potential to make a real difference. Our degrees are deeply embedded within the context of a changing world: climate change, rapid urbanization, and the depletion of natural resources by a growing population.

Recognised for our teaching and research, we have achieved 100% student satisfaction in eight of the past twelve National Student Surveys[1], while our research is ranked joint 1st in the UK for societal impact in Geography and Environmental Studies[2].

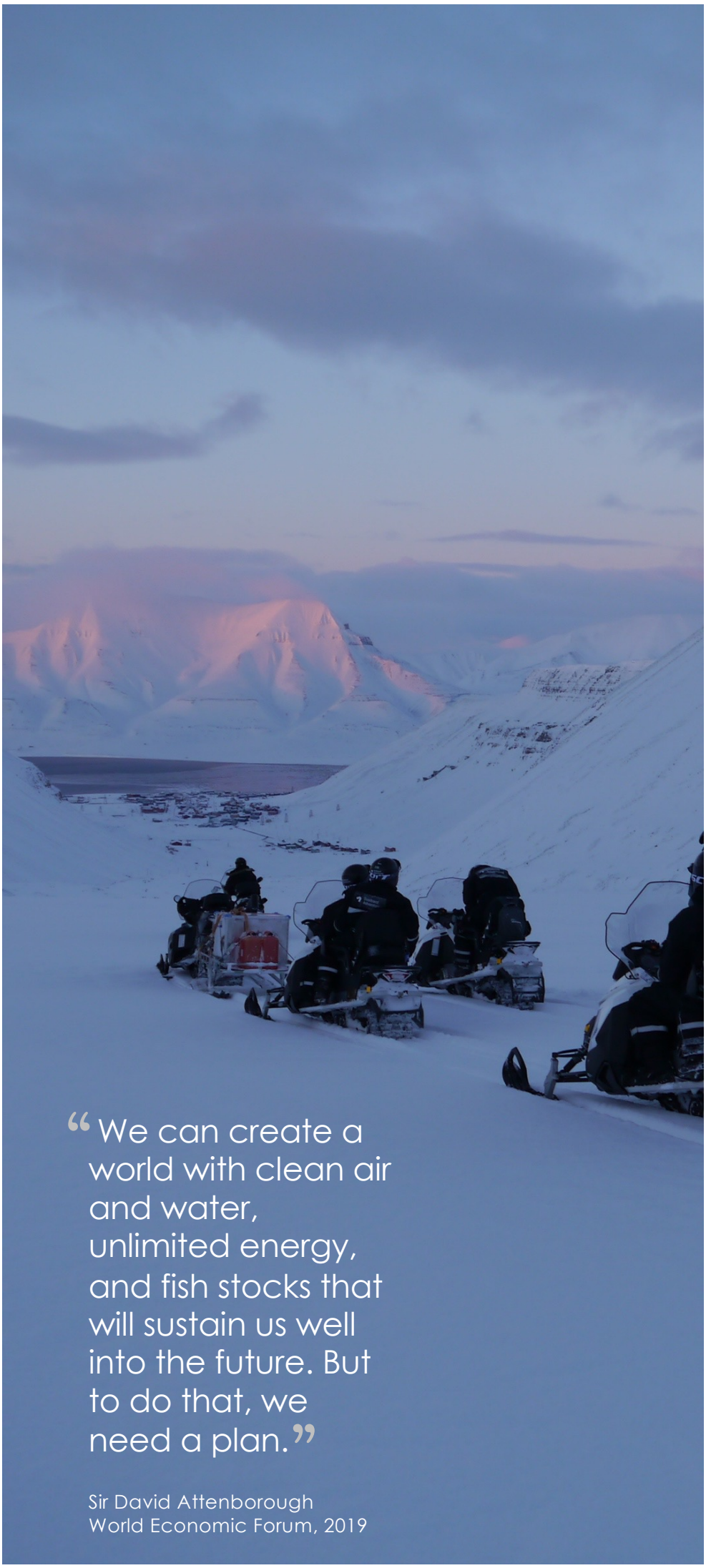
This wealth of expertise offered by our staff, including climate change impacts, sustainable cities, freshwater and marine science, and remote sensing of the environment, contributes directly to our courses.

You will benefit from our location on the Causeway Coast, strong industry and government partnerships, and established industrial placements and study abroad opportunities. We will strive to prepare you for the world of tomorrow."

Prof Sara Benetti
Head of School

ges@ulster.ac.uk
www.ulsteruniges.com

[1] National Student Survey, 2014-2026
[2] Research Excellence Framework, 2021



"We can create a world with clean air and water, unlimited energy, and fish stocks that will sustain us well into the future. But to do that, we need a plan."

Sir David Attenborough
World Economic Forum, 2019

ENVIRONMENTAL SCIENCE
BSc (Hons)

SCIENCE FOR A CHANGING WORLD

UCAS Codes

BSc Environmental Science: F900
with Industrial Placement: F900
with Study Abroad: F900
with Education: F8X3

Entry requirements

BCC at A-level.

No specific subjects are required, although a science subject is preferred.

Dr Edoardo Grottoli
Course Director

ges@ulster.ac.uk

Taking care of our planet for future generations is one of our most important responsibilities.

By studying Environmental Science with us, you will gain the knowledge and skills to address issues such as climate change, conserving animal and plant diversity, environmental impacts of development and the management of water and air pollution. If you enjoy science or geography and have an interest in environmental issues, this course is for you.

Multidisciplinary scientific approaches mean our degree in environmental science has diverse ranges of practical applications; from assessing drinking water quality, to studying processes that cause erosion, investigating agricultural pollution sources, to assessing the impact of industrial developments on our flora and fauna.

At this time of unprecedented environmental change on planet Earth, society is having to adapt to processes and hazards that are poorly understood. Now, more than ever, society needs graduates with an inter-disciplinary understanding of the complexity and uncertainty of Earth systems, and with the skills to observe, measure, model and manage these systems. Our environmental science degree at Ulster spans the terrestrial, atmospheric and freshwater systems.

To learn more about environmental science, visit: www.ulsteruniges.com

Year 1 modules
The Fundamentals

Skills Toolbox
Environmental Systems
Sustainable Worlds
The Hydrosphere
The Biosphere
The Lithosphere

Year 2 modules
Processes and Skills

The Atmosphere
GIS & Remote Sensing
Preparing for Climate Change
Freshwater Systems
Ecology & Biogeography
Environmental Field School

Year 3 optional
Diploma

Industrial Placement
Study Abroad

Final Year modules
Applying Knowledge

Environmental Change
Advanced GIS & Remote Sensing
Research & Professional Skills
Water Resource Management
Environmental Management
Dissertation

ENVIRONMENTAL SCIENCE
BSc (Hons)

GRADUATES – WHERE ARE THEY NOW?

Colin Armstrong
Freshwater Scientist, DAERA
Marine protected areas, invasive species, marine historic environment

Edward Lockhart
GIS Analyst, ABPmer
Marine renewables, coastal processes, metadata production, bathymetry surveys

Gail McAleese
Offshore Geophysicist, GDG
Wind farm assessments, oil industry surveys, data cable surveys

Rosie McMenamin
Town and Country Planner, DCSDC
Environmental impact assessments, habitat regulation assessments

Dellwyn Kane
Ecologist, Kane Ecology Ltd.
Protected species, bats, badgers, otters, newts, protected habitats

Pete Rodgers
Hydrogeologist, ERM
Contaminated soil and groundwater, environmental consultancy

Lynda Byrne
Mapping and Charting Officer, OSNI
Spatial data, orthophotography, land registry, farmland boundaries

Thomas Smyth
Research Scientist
Mathematical modelling, fluid flow, sediment dynamics

"During my degree I completed a year long placement with NIEA and this experience, together with the skills that were taught as part of the degree, have proved to be very valuable in preparing me for the various roles I have had within the Department of Environment and NIEA."

Colin Armstrong
BSc Environmental Science
Principal Scientific Officer, DAERA

MARINE SCIENCE
BSc (Hons)

SCIENCE FOR A CHANGING WORLD

UCAS Code

BSc Marine Science: F719

Entry requirements

BCC at A-level.

No specific subjects are required, although a science subject is preferred.

Dr Janina Büscher
Course Director

ges@ulster.ac.uk

Are you passionate about the health of our oceans and life in our seas?

Our degree in marine science is the integrated study of our coasts and oceans. It covers aspects of marine biology and ecology, through marine geology, underwater archaeology and ocean engineering, to the oceans as an economic resource and as a global climate regulator.

At a time of unprecedented environmental change on Earth, society is having to adapt to processes and hazards that are poorly understood, and at the same time feed a growing population. Now, more than ever, society needs graduates with an understanding of the complexity and uncertainty of marine systems, and with the skills and competencies to observe, measure, model and manage them.

We achieve this in our degree through the integration of theoretical, practical and field-based approaches. Our Coleraine campus is ideally located on the Causeway Coast, one of the world's most spectacular natural laboratories.

The Blue Economy is estimated to be worth more than US$1.5 trillion per year globally. It provides over 30 million jobs and supplies a vital source of protein to over three billion people (LSE, 2023). Our graduates find employment all over the world in the public and private sectors, in areas as diverse as offshore renewables, coastal engineering, fisheries science, marine mammal science, scientific diving, coastal zone management and marine conservation.

To learn more about marine science, visit: www.ulsteruniges.com

Year 1 modules
The Fundamentals

Skills Toolbox
Marine Systems
Sustainable Worlds
The Hydrosphere
The Biosphere
The Lithosphere

Year 2 modules
Processes and Skills

The Atmosphere
GIS & Remote Sensing
Preparing for Climate Change
Coastal & Marine Processes
Marine Ecology: Processes & Systems
Marine Field School

Year 3 optional
Diploma

Industrial Placement
Study Abroad

Final Year modules
Applying Knowledge

Environmental Change
Advanced GIS & Remote Sensing
Research & Professional Skills
Modelling Marine Species & Habitats
Applied Oceanography
Dissertation

MARINE SCIENCE
BSc (Hons)

GRADUATES – WHERE ARE THEY NOW?

Charles Ford
Sustainable Aquaculture Industry
Sustainable aquaculture, fisheries, seafood, fish farms, global seafood supply

Sarah Bond
Analyst, ARUP
Marine mammal science, integrated solutions to ocean data collection

Rebecca McCready
Coastal Processes Scientist, Canterbury Council
Flood and coastal erosion risk management, stakeholder engagement

Niall McGinty
Fisheries Scientist, University of Iceland
Species distribution modelling, commercially important fish, marine ecology

Craig Dyer
Senior Hydrographic Surveyor, Fugro Ltd.
Civil Hydrography Programme, UKHO, MCA offshore sonar surveys

Connor McCarron
Coastal Engineer, HR Wallingford
Marine geophysics, sedimentology, numerical modelling, oceanography

Aaron Kirkpatrick
Marine Mammal Scientist, Baylor University
Marine mammals, adaptation, climate Change, physiological adaptations

Fionnuala Kerr
Environmental Engineer, ABCO Marine
Marine engineering, renewable energy, subsea cables

"I spent my placement year at the Atlantic Whale Foundation, based in Tenerife. During this placement, I was given some amazing opportunities including regular boat trips to carry out surveys on the resident and migratory cetacean populations as well as underwater video recording of Pilot Whales, a truly unforgettable experience! "

Rebecca McCready
BSc Marine Science
Coastal Scientist, Canterbury Council

GEOGRAPHY
BSc (Hons)

PHYSICAL & HUMAN

UCAS Codes

BSc Geography: F800
with Industrial Placement: F800
with Study Abroad: F800
with Education: F8XH

Entry requirements

BCC at A-level.

No specific subjects are required, although geography is preferred.

Dr Suzanne Beech
Course Director

ges@ulster.ac.uk

Taking care of our planet for future generations is one of our most important responsibilities.

Geography is the study of the Earth as the home of people. It concerns the disposition and interaction of people, resources and natural events, and places emphasis on cultural and social perspectives. It also explores the nature, scale and processes affecting physical features on the surface of the Earth, and the human element in global events.

Our Geography degree provides a multi-disciplinary foundation in these areas and provides access to a wide range of careers. At Ulster, you have access to a range of human and physical geography modules, so you can tailor your degree according to your preference.

A degree in geography opens many new doors in terms of your career choices. Geographers specialise in understanding and trying to improve society's problems. In our degree programme you will develop a range of quantitative and qualitative research skills, and address a range of human and physical geography issues; such as climate change, coastal erosion, conflict, development, and poverty.

Our graduates are employed across a wide range of fields. Many have forged careers in environmental agencies, GIS, education, consultancy, town and country planning, and public administration.

To learn more about geography, visit: www.ulsteruniges.com

Year 1 modules
The Fundamentals

Skills Toolbox
Sustainable Worlds
Key Concepts in Geography
The Biosphere
The Lithosphere
The Hydrosphere

Year 2 modules
Processes and Skills

The Atmosphere
GIS & Remote Sensing
Preparing for Climate Change
Development, Environment & Society
Geography Field School
Freshwater Systems (optional)
Coastal Processes (optional)

Year 3 optional
Diploma

Industrial Placement
Study Abroad

Final Year modules
Applying Knowledge

Dissertation
Conflict Geographies
Research & Professional Skills
Geographies of Transnationalism (optional)
Environmental Change (optional)
Adv GIS & Remote Sensing (optional)
Water Resource Management (optional)
Environmental Management (optional)

GEOGRAPHY
BSc (Hons)

GRADUATES – WHERE ARE THEY NOW?

Paul Fearon
Geospatial Specialist, NZ Government
GIS solutions, water resources, surveying, energy solutions

Scotty McFarland
Geography Teacher
Education, empowering young people, All things geography

Matthew Strahan
3D Laser Scanning Specialist
Laser scanning, built heritage, 3D models, AutoCAD, industrial heritage

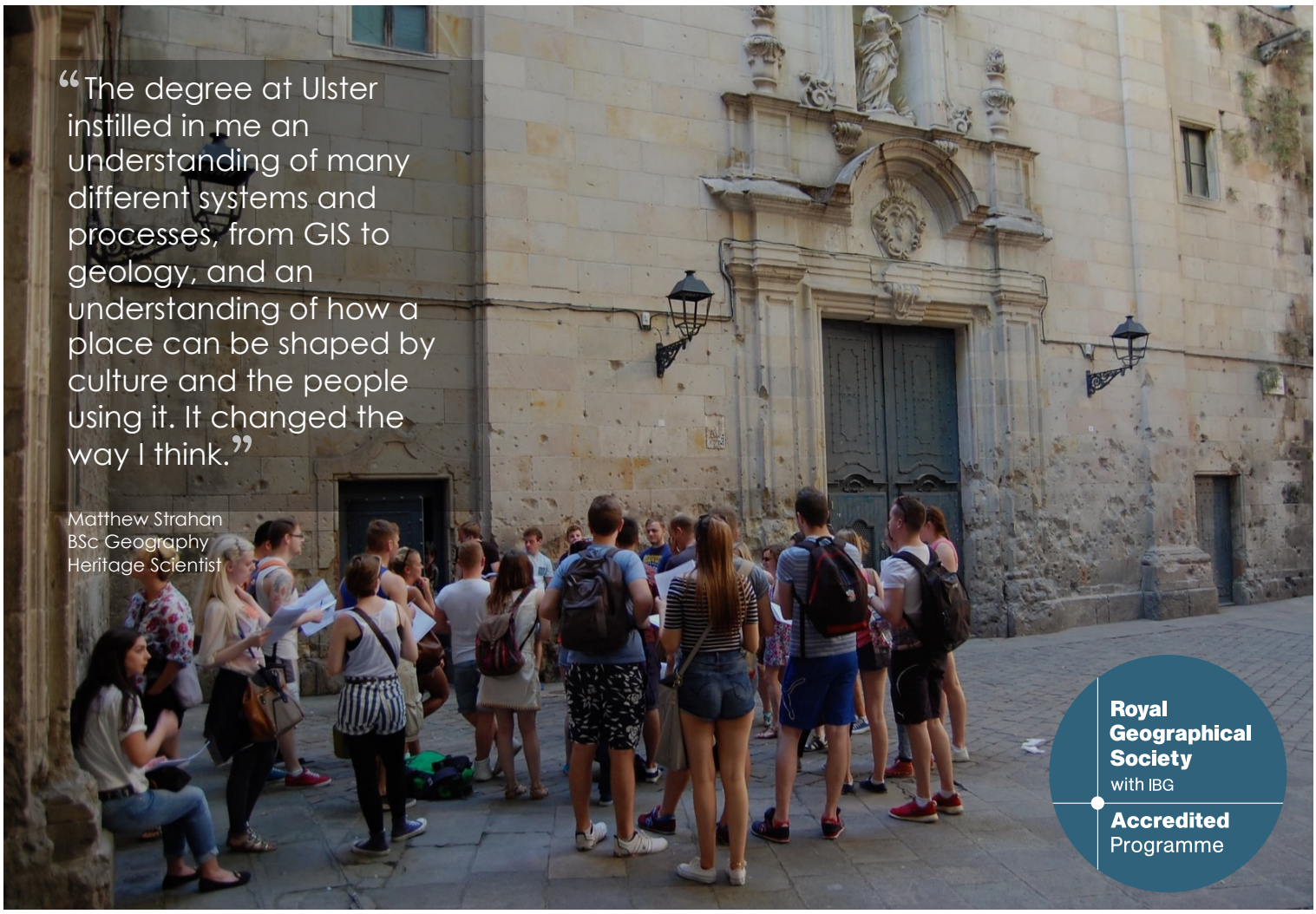
Patricia Doran
InterTrade Ireland
Outreach, logistics, promoting cross-border trade and development

Hannah Orr
Mapping and Charting Officer, OSNI
GIS, data analysis, planning, business development, land folio searches

Khadum Hasson
Financial Crime Analyst, PwC
Financial crime analysis, business analysis,
GIS, geospatial data

Ryan Johnston
GIS Data Engineer
GIS analysis, transport industry, SMEs, multinationals, stakeholder engagement

Martine Cameron
GI Specialist, Department for Communities
GIS, administration and management of spatial database infrastructure



FIELDWORK

AT HOME AND OVERSEAS

There is a strong emphasis on field training in all our degree programmes. The field provides a natural laboratory where you can learn. From residential trips at home and overseas (Spain, Scotland), to day trips surveying and sampling, the field is where you put theory into practice.

We are located on the spectacular Causeway Coast, minutes away from natural laboratories including the open sea, estuaries, rivers, lakes, woodlands and uplands.

Fieldwork is widely recognised as being key to developing employable skills.

To learn more about fieldwork, visit: www.ulsteruniges.com/fieldwork

YEAR 3 OPTIONS

INDUSTRIAL PLACEMENT OPTION

Dr Wes Forsythe
DPP Coordinator

The optional Diploma in Professional Practice (DPP) is a work-based placement that takes place between the second and final years of your degree programme. Students work in a salaried position with an organization under the supervision of work- and university-based coordinators. The University's Careers Service offers a range of support in seeking a suitable work placement, from applications, preparing a CV, to interview skills.

The DPP programme has a proven track record in improving the professional experience and profile of our students in readiness for the workplace. It has developed technical and soft skills, improved resilience and focus and has often resulted in a more professional attitude to study. Sometimes regarded as a 'long interview', many of our students have been rehired on graduation by their placement provider.

'Placement gave me the opportunity to taste the real world and make contacts with organizations and individuals already working in environmental management or conservation. I really did feel part of the team and was treated as such. I developed communication and presentation skills through the many presentations I delivered. You have nothing to lose and everything to gain from a placement.'

Chris Madden, DPP student

STUDY ABROAD OPTION

Dr Colin Breen
DIAS Coordinator

Why study abroad?

- Build on your existing skills and develop new ones by adapting to a different academic environment and way of life.
- Broaden your academic experience by taking modules and classes that may not be available at Ulster.
- Experience new cultures through travel, exploration, and immersion in a different country.
- Enhance your employability, as international study experience is highly valued by many employers.
- Improve your language skills through everyday interactions, even if your classes are taught in English.

Schemes include ISEP and Study USA for placements in the United States, and Turing for opportunities across Europe, Australia, and South America: www.ulster.ac.uk/goglobal

The Short Term Go Global Programme also offers summer work and volunteering opportunities: www.ulster.ac.uk/student/goglobal/short-term

'Reflecting on my year abroad in Alicante, I genuinely had the time of my life and made friends for life. It helped me mature and taught me a lot about different ways of life and cultures.'

Matthew Mulligan, DIAS student

LABORATORY EXPERIENCE

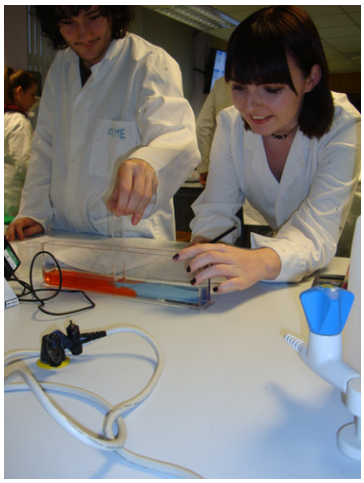
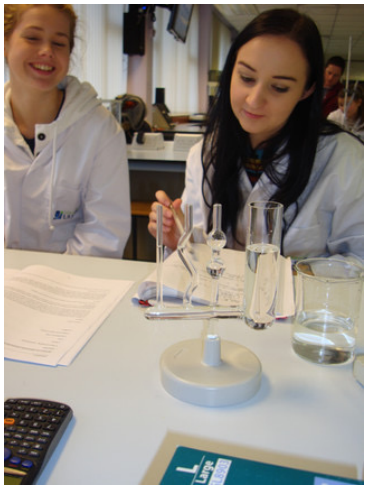
EMPLOYABLE SKILLS

Develop your problem-solving, team-working and critical-thinking skills, and gain exposure to dissections, reactions, materials and equipment in campus and field-based laboratory settings.

Develop your lab skills for careers in areas as diverse as fisheries stock assessment, pollution monitoring, water-quality assessment, soil testing, agricultural monitoring, applied oceanography and ecotoxicology.






GIS AND REMOTE SENSING

OUR SPATIAL WORLD

The use of geospatial technology is changing the way we look at planet Earth. It has revolutionised everything we do, from enhancing humanitarian efforts such as disease control, disaster response, and urban planning, to providing innovative new approaches for environmental monitoring and understanding the ongoing impacts of climate change.

The global GIS market is currently valued at around £10 billion, with continued growth expected in the coming years. With that expansion comes increased demand for graduates skilled in remote sensing and GIS technology.

At Ulster, you will focus on applying remote sensing and GIS technology to topics in terrestrial ecology, ocean sciences, human and physical geography, heritage, and hydrology.

Typical applications

Remote sensing is used in almost every discipline in geography, marine science and environmental sciences, from studies tracking rapid increases in urbanisation over the past half-century, to studies showing the accelerating decline in glaciers and ice sheets over the same time periods.

Long-term satellite programmes such as Landsat provide unparalleled opportunities to observe the changes on the Earth's surface since the 1970s. This includes some of the earliest studies of forest and agricultural health, methods which are now applied in ever finer detail through the use of uncrewed aerial vehicles (UAVs or "drones").

SAR satellites like Sentinel-1 are used to monitor Earth's surface day or night, rain or shine. SAR imagery can be used for anything from flood detection and monitoring, detecting damage to urban areas due to natural disasters and human conflicts, detecting deforestation, and even monitoring agricultural soil moisture.

Thermal satellite imagery can detect and monitor forest and wildfires, or to monitor the increased heat present in urban areas. This "urban heat island" effect has a profound negative impact on human health, with unequal impacts on socio-economically disadvantaged populations.

Newer satellites such as Sentinel-5 are being used to monitor the composition of our atmosphere, allowing scientists to directly measure pollutants and greenhouse gases in the atmosphere.

These are only some of the applications of remote sensing and GIS data and technology. To learn more, visit: www.ulsteruniges.com/ug-gis-remote-sensing