UNIVERSITY OF Southampton

ADDRESSING GLOBAL CHANGE

GEOGRAPHY AND ENVIRONMENTAL SCIENCE

POSTGRADUATE COURSES 2020

FOUNDING MEMBER OF THE RUSSELL GROUP

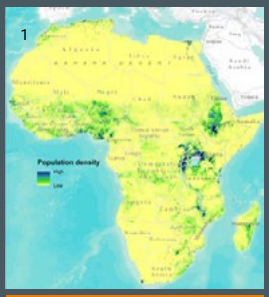
RESEARCH EXCELLENCE

Our research is helping to address some of today's major global challenges, including climate change, social and health inequalities, poverty and recession. We're dedicated to being a world-leading centre for geographical and environmental research, internationally renowned for the excellent quality and high impact of our work.

Our research strategy fosters outstanding work in a set of four key areas, each represented by a research group:

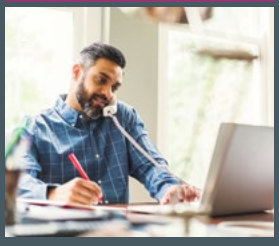
- Economy, Society and Governance
- Environmental Change and Sustainability
- Landscape Dynamics and Ecology
- Population, Health and Wellbeing

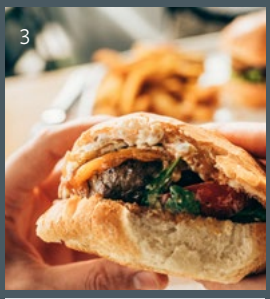
Underlying our activities is strength in geospatial analysis, modelling, and spatial statistics. Our interdisciplinary environmental research unit, GeoData, focuses on high-impact, applied research topics with a range of governmental and non-governmental organisations worldwide. In line with our strategy, our research income has doubled over the past four years to more than £2 million, and our Graduate School is expanding rapidly.



Our **WorldPop group** have developed new ways to map populations globally and plan vaccination campaigns to help eliminate polio in Nigeria

The **Work & Home project** is exploring trends of the self-employed working from home, the blurred boundaries between workplace and home, and what this means for our economy





With concerns over the sustainability of meat, the **Man Food project** explores the relationship between masculinity and men's motivations for meat consumption

Our researchers are exploring debris and sediment deposition from flooding, in cities and towns on coasts or floodplains, through a **Leverhulme Trust project**

1 WorldPop population count map for each 100x100m grid square across Africa, 2019.
2 Home working and the economy
3 Food consumption and sustainability
4 Exploring the impact of flooding

TAUGHT PROGRAMMES

Key facts

Unless otherwise stated

Entry requirements: a UK bachelors degree with upper second-class honours or higher in Biology, Environmental Sciences, Geography, Geology, Oceanography, Physics or Zoology. [MSc Applied GIS and Remote Sensing and MSc Sustainability: a UK bachelors degree with upper second-class honours or higher in geography or a subject related to geography.] See international equivalent qualifications **www.southampton.ac.uk/pg/entry**

English language: band B, IELTS 6.5 overall, with a minimum of 5.5 in all components. [MSc Sustainability: band C, IELTS 6.5 overall, with a minimum of 6.0 in all components.] For more information, visit **www.southampton.ac.uk/pg/el**

Duration: one year (full time); 27 months (part time); no part time option for MSc Applied Geographical Information Systems and Remote Sensing

Start date: September

Applying: University application form with transcripts, two academic references and personal statement. [MSc Applied Geographical Information Systems and Remote Sensing and MSc Sustainability: University application form with transcripts and two academic references]

Closing date: 31 July, early applications encouraged

Fees & funding: For more information visit **www.southampton.ac.uk/pg/geof** and **www.southampton.ac.uk/pg/fees**

Find out more:

www.southampton.ac.uk/gespgt

Or to have specific questions answered:

T: +44 (0)23 8059 9699

E: enquiry@southampton.ac.uk

Global population growth and accelerating rates of climate change present challenges for the future of our planet and human population. Geography and Environmental Science at Southampton is an established community of passionate experts working together, to tackle these global issues. Our state-of-the-art facilities and unique professional development opportunities, all embedded in a thriving research culture, create a stimulating learning environment, which allows our students to flourish and help contribute to changing the world for the better.

MSc Applied GIS and Remote Sensing

Programme Director:
Dr Gareth Roberts

This degree will give you access to a high-end geoprocessing suite and state-of-the-art terrestrial laser scanning equipment. Our dynamic academic team, all actively involved in innovative research, are highly engaged with the global issues effecting the planet including food security, public health and environment management. A unique feature of the MSc is that you will have the opportunity to learn how to programme in both IDL (applicable to remote sensing) and Python (applicable to GIS) to enable you to automate big GIS and remote sensing tasks. Programming skills are in high demand by employers and our graduates enjoy exceptionally high employment rates with a range of career choices from working for national and international environmental consultancy firms to government organisations and academia.

Compulsory modules include:
Core skills in GIS, Practical Skills in Remote Sensing, Academic and Practical Skills Development, Research Skills and Project Work

Optional modules include:
GIS for Environmental Management, Programming Skills for Remote Sensing, Environment and Development, GIS for Healthcare Management, Topographic Data Analysis Techniques and Applications, Programming for GIS and Spatial Analysis, Remote Sensing for Earth Observation

ENVIRONMENTAL & SUSTAINABILITY PROGRAMMES

Taught by award-winning lecturers, we offer a suite of postgraduate environmental and sustainability courses that integrate theory-based learning with field project work, from waste management to ecosystem service, sustainability and biodiversity conservation.

MSc Sustainability

Programme Director:
Professor Craig Hutton

This research-led, applied, interdisciplinary programme explores sustainability in both developed and developing societies. It focuses on the global issues affecting the planet, including climate change and extreme events, social and health inequalities, poverty and resilience, global migration patterns, and sustainable business pathways. Students can choose optional modules covering a range of subjects. You will be highly engaged with the global issues affecting the planet today in both developed and developing societies.

Compulsory modules include:
Environmental Impact Assessment, Introduction to Sustainability, Data Collection and Research Methods for Sustainability, Research Project

Optional modules could include:
Water Pollution, Consultancy Skills, Evaluation and Monitoring, Core Skills in GIS, Environmental Law and Management Systems, Project

TAUGHT PROGRAMMES

Management, Remote Sensing for Earth Observation

MSc Biodiversity and Conservation

Programme Director:
Dr Patrick Osborne

Biodiversity loss remains one of the key environmental concerns of our time, and conservation work requires experts who understand the science underpinning practical activities. This degree will develop your understanding, providing excellent preparation for careers in ecological consultancy or conservation management. You will be able to monitor species diversity, change, population abundance and distribution, all key skills in the protection and enhancement of our ecosystems.

Compulsory modules include:
Biodiversity and Conservation, Freshwater Ecosystems, Environmental Impact Assessment, Global Change Biology, Advanced Quantitative Methods

Optional modules could include:
Applied Ecology, Water Pollution, Geographical Information Systems for Environmental Consultants, Deep Sea Ecology, Bioenergy, Environmental Law and Management Systems

MSc Environmental Monitoring and Assessment

Programme Director:
Dr Patrick Osborne

This degree offers training in monitoring environmental data and assessing predicted changes for the safe and responsible management of our environment. We will give you the knowledge and professional skills required for a career as an environmental scientist in a fast-growing and rapidly changing industry. You will engage in practical work such as developing an Environmental Management System for a real-life client organisation to meet the international standard ISO14001 giving you a unique highly sought-after skill set from employers.

Compulsory modules include:
Sustainable Resource Management, Environmental Impact Assessment, Environmental Law and Management Systems, Coastal and Maritime Engineering and Energy, Geographical Information Systems for Environmental Consultants, Advanced Quantitative Methods

Optional modules could include:
Coastal and Maritime Engineering and Energy, Geographical Information Systems for Environmental Consultants, Waste Resource Management, Energy Resources and Engineering, Coastal Flood Defence and Management, Bioenergy, River and Estuary Restoration, Air Quality and Environmental Pollution

MSc Environmental Pollution Control

Programme Director:
Dr Patrick Osborne

Our MSc Environmental Pollution Control course provides excellent training for careers in air, water and waste pollution management. You will explore the scientific basis of pollution and practical approaches to its control. You will also have the opportunity to learn about the legal, business framework, and the many environments affected by pollution. Modules will cover Environmental Impact Assessment and Sustainable Resource Management, developing critical skills sets for students aiming to pursue a career as an environmental scientist.

Compulsory modules include:
Sustainable Resource Management, Water Pollution, Environmental Law and Management Systems, Advanced Quantitative Methods

Optional modules include:
Coastal and Maritime Engineering and Energy, Energy Resources and Engineering, Freshwater Ecosystems, Geographical Information Systems for Environmental Consultants, Waste Resource Management, Coastal Flood Defence and Management, Wastewater Process Engineering

MSc Water Resource Management

Programme Director:
Dr Patrick Osborne

Highly skilled water scientists and engineers are vital for the conservation and enhancement of our aquatic environment, both locally and globally. This MSc will provide you with the ability to assess the potential and existing impacts on the water environment from industrial practices, abstraction, and agriculture. You will explore the scientific and engineering management of our aquatic resources and gain an in-depth understanding of freshwater ecosystems, visit river restoration sites and examine the state of fisheries. This course provides you with a dynamic education where innovative lecturers teach you the professional skills to follow a rewarding career as a water-focused environmental scientist.

Compulsory modules include: Freshwater Ecosystems, Water Pollution, and Advanced Quantitative Methods

Optional modules include:
Coastal and Maritime Engineering and Energy, Coastal Morphodynamics, Sustainable Resource Management, Geographical Information Systems for Environmental Consultants, Waste Resource Management, Coastal Flood Defence and Management, Wastewater Process Engineering, Environmental Law and Management Systems

RESEARCH PROGRAMMES

Key facts

Unless otherwise stated

Entry requirements: a UK bachelors degree with upper second-class honours and a Master of Science/Art in a relevant subject, plus satisfactory performance at interview. See international equivalent qualifications **www.southampton.ac.uk/pgp/entry**

English language: band C, IELTS 6.5 overall, with a minimum of 6.0 in all components. For more information visit **www.southampton.ac.uk/pg/el**

Duration: three years for a standard full-time PhD, or six years part time; with a maximum period of candidature of four years (full time) and seven years (part time)

Start date: September, but sometimes possible throughout the year

Applying: University application form with transcripts, research proposal and two references

Closing date: Applications for full- and part-time study are welcomed at any time

Fees and funding: may be available via the University, the South Coast Doctoral Training Partnership (SCDTP) and INSPIRE NERC Doctoral Training Partnership (DTP). For more information visit **www.southampton.ac.uk/pg/geof**, **www.southampton.ac.uk/pg/fees**, **www.southcoastdtp.ac.uk** and **www.inspire-dtp.ac.uk**

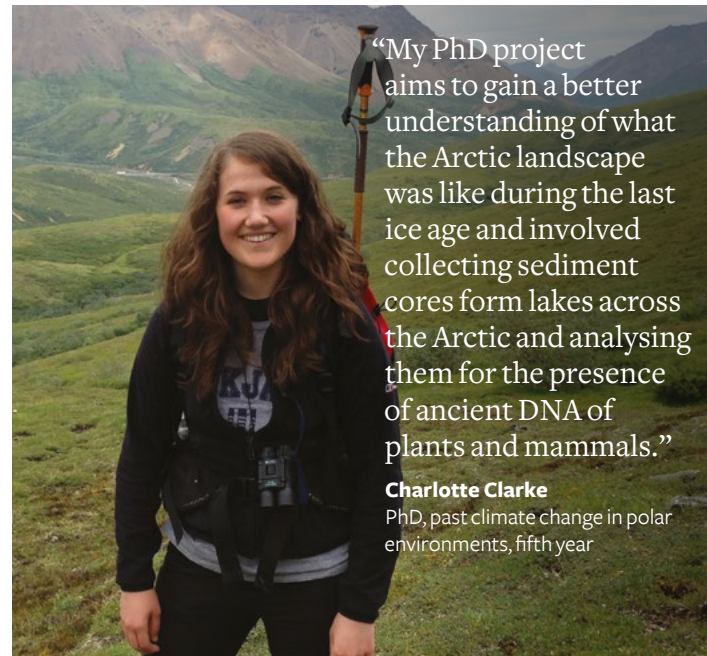
Our PhD programme offers an excellent foundation to your future career and our aim is to secure the health of our planet by training the leaders of the future to address our greatest global challenges. You will spend your time conducting research in a passionate community, working alongside leading scientists in their field, committed to addressing global challenges in environment, nature, health and population.

PhD

We host a vibrant international postgraduate community set in one of the leading centres for geographical and environmental research for full- and part-time study. Facilities include laboratories for earth science and palaeoenvironmental research (PLUS), hydrological and ecological research and an instrumented research catchment in the New Forest, all supported by technical support staff. In addition, research using GIS and earth observation is supported by a dedicated technician and a suite of geocomputation computers.

Research students enjoy high levels of support, accommodated in a purpose-built Graduate School, with a minimum annual support grant of £750 and are encouraged to apply for further funding, for example, conference attendance.

Our Doctoral Programme currently has round 65 full- and part-time students from the UK and overseas, funded by research councils and other sources. Postgraduates are integrated into our research community through our active postgraduate research groups, participation in research seminars with visiting speakers, and research workshops given by both students and staff.



Find out more:

www.southampton.ac.uk/gespgr

Or to have specific questions answered:

T: +44 (0)23 8059 2216

E: fels-pgr-apply@southampton.ac.uk

GLOBAL IMPACT

We are making a positive difference to millions of lives across the world, using revolutionary approaches, advances in technology and innovative research. Examples of our research include:

- **Climate change in the South Pacific:** Professor Pete Langdon, with colleagues, is studying the dynamics of long-term climate change and impacts on societies
- **Improving understanding of arid landscapes:** Dr Jo Neild has undertaken research in some of the most incredible and remote arid environments from Botswana salt pans to Icelandic glaciers to help understand which wind shapes the landscape
- **Supporting disaster relief in Nepal:** Professor Andy Tatem and World Pop used mobile phone data to ensure support got to those most in need following the Nepal earthquake
- **Supporting decision-making:** Dr Samantha Cockings' research is producing near real-time spatiotemporal population estimates to aid decision making and policy formulation in sectors such as health, emergency response and national security
- **Marine Plastic Pollution:** Led by Dr Malcolm Hudson, our Marine Plastics research group is working with government on plastic pollution issues, including the effects of plastics in waste water treatment systems and microplastic behaviour in aquatic and sedimentary systems
- **Food security and sustainable water:** Professor Justin Sheffield leads the BRECcIA project: "Building Research Capacity for sustainable water and food security in sub-Saharan Africa," which aims to build water and food security through research and training in Malawi, Ghana and Kenya
- **Biodiversity in ecosystems:** Dr Jake Snaddon is working on The Biodiversity and Ecosystem Function in Tropical Agriculture (BEFTA) Project. This involves understanding the effect of habitat complexity within oil palm plantations on biodiversity and testing the role of biodiversity in ecosystem functioning and ecosystem services

WE ARE:

developing evidence, data and tools to tackle the environmental and societal challenges that we face globally

studying the dynamics of long-term climate change and how this will affect our growing world population

educating our government and policy makers on the devastating impacts of pollution

shaping the next generation of scientific leaders and innovators to address our planets' greatest challenges with the aim of changing the world for the better

HOW DO I APPLY?

Before applying for postgraduate taught study, you should:

- check you meet the entry requirements
- if applicable, ensure that you meet any special requirements for international students
- identify how you will fund your postgraduate study
- obtain supporting documentation to include as part of your application

APPLY NOW

Apply to Southampton for postgraduate taught degrees and for more information on PhD opportunities

Find out more:
www.southampton.ac.uk/pg

CHOOSE SOUTHAMPTON

Top 100
global university*

Top 20
UK university**

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in the UK for research intensity***

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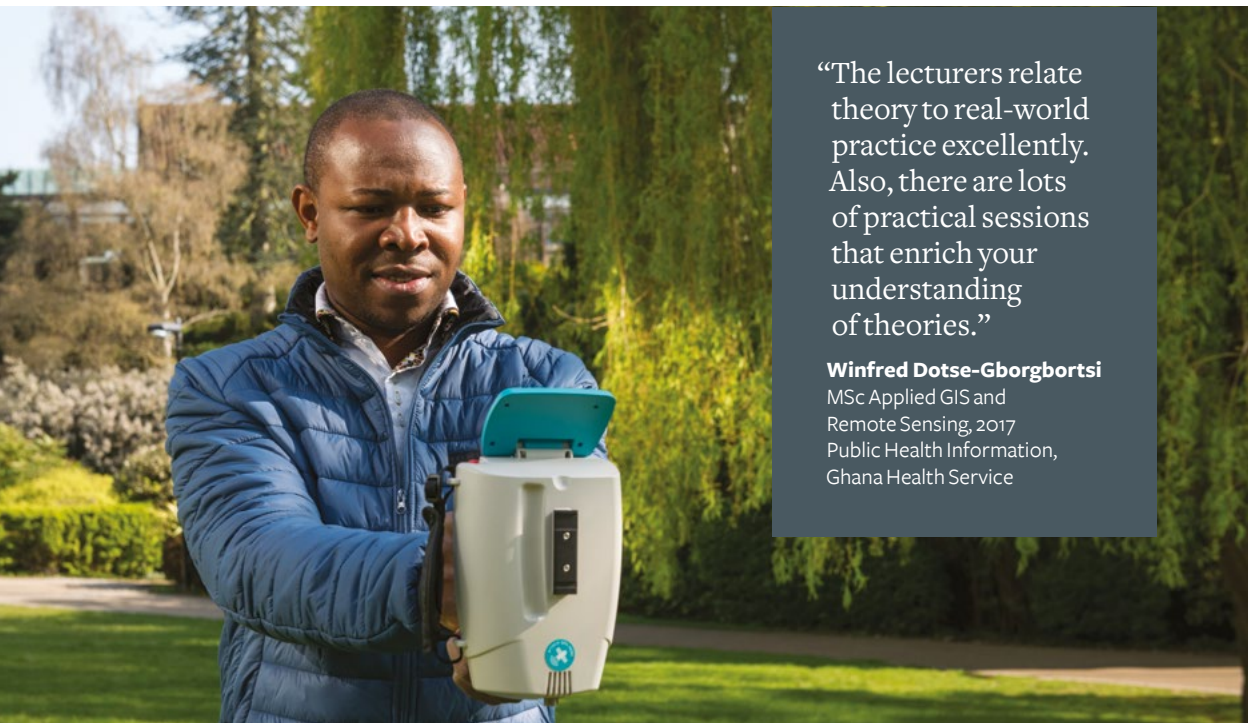
State-of-the-art equipment including a DNA lab, high-end geoprocessing suite and spectroscopy facilities

* QS World University Rankings, 2019 ** Complete University Guide, 2020 *** Latest REF, 2014



"The lecturers relate theory to real-world practice excellently. Also, there are lots of practical sessions that enrich your understanding of theories."

Winfred Dotse-Gborgbortsi
MSc Applied GIS and Remote Sensing, 2017
Public Health Information, Ghana Health Service

Find out more:
www.southampton.ac.uk/gespg

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