

## School of Geography and Environmental Sciences

# REMOTE SENSING AND GIS (ONLINE DISTANCE LEARNING)

PG CERTIFICATE, PG DIPLOMA OR MASTERS (PART-TIME)

## Why Remote Sensing and GIS?

- Increasing demand for remote sensing and GIS professionals within government, business, education and voluntary sectors.
- Rapid growth in availability of spatial data, mainly via remote sensing satellites and other big data sources.
- Huge potential to map, monitor and understand systems and change in terrestrial and marine environments.
- Vast application areas, both physical and human geography climate change, agriculture, forestry, natural resource management, marine planning, sustainable urban development, epidemiology and crime analysis to name a few.
- A must-have skillset to handle spatial data effectively.

decode the colours in images and solve geographical mysteries

### Who is it for?

- New graduates want to enter GIS-related employment for the first time, or add remote sensing and GIS to your skillset to enhance employability or change career?
- Professionals already in remote sensing/GIS-related employment and want to broaden and deepen your remote sensing and GIS knowledge and skills with a view to making better use of spatial technologies, or want to enhance your career and promotion prospects?

YES, THIS IS FOR YOU!

- Flexible learning while each module has assessment deadlines, you study at a time and pace that suits you.
- And, you decide the duration of the course! PG Cert in 1 year, PG Dip in 2 years and MSc in 3 years.

## A bit about online learning experience!

Modules are taught online via Blackboard Virtual Learning Environment that provides access to lectures, practical exercises, reading and additional study materials. Communication tools (discussion boards, video-conferencing and email) are integrated within Blackboard and all modules are supported by experienced lecturers and tutors. Progress is assessed entirely online – there are no formal sit-in examinations.

## A bit about us!

We are an established provider of online distance learning postgraduate courses. With 25 years' experience of teaching GIS, and nearly 20 years via online distance learning, we have a long and successful track record in GIS education. We enjoy imparting knowledge, skills and confidence that enhance employment prospects with our innovative and career-focused modules and research.

## The course

Designed to provide up-to-date content and experience of both remote sensing and GIS topics, this course incorporates theoretical materials and extensive hands-on exercises covering aspects such as acquisition, manipulation, analysis and interpretation of various forms of geospatial data. Examples of the application of remote sensing and GIS are drawn from both the physical and social environments. The programme aims to satisfy an industrial and public sector demand for science-qualified geospatial personnel who can use remote sensing data and advanced spatial analytical skills to interpret big data and thus inform planning and development in a variety of disciplines. After successfully completing the PG Dip modules, you may transfer to the Masters part of the programme. This requires completion of a substantial independent research project, written in the form of a research journal article.



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## Course structure (C = Compulsory, O = Optional)

#### Year

- Introduction to Remote Sensing (C)
- Principles of GIS (C)
- Photogrammetry and Advanced Image Analysis (C)
- Programming for GIS & Remote Sensing (C) (You earn a PG Certificate, or proceed further)

#### Year 2

- Advanced Active and Passive Remote Sensing (C)
- Spatial Data Management (C)
- Spatial Data Analysis (O)
- Web-based GIS (O)
- Marine Remote Sensing (O)
- GIS for Environmental Management (O) (You earn a PG Diploma, or proceed further)

### Year 3

 MSc Research Project (Great job! You just earned a MSc dearee)

### **Entry requirements**

Applicants must hold a degree in a science related subject or equivalent or demonstrate their ability to undertake the course through the accreditation of prior experiential learning.

## You get!

- A PG Certificate, PG Diploma, or MSc Degree
- Access to a fully online course! You can study from almost anywhere and there is no need to travel to classes
  choose the times you study each week to suit yourself.
- Up-to-date skills and experience to deal with geospatial data and methods.
- A free copy of ArcGIS, the remote sensing package ERDAS Imagine, and the data analysis package SPSS.
- Support and advice from experienced lecturers, tutors, librarians, e-learning and IT staff.
- Access to online resources such as e-books, digital lectures and podcasts, discussion boards and videoconference tools all within a dedicated e-learning platform.
- Improved employability, professional and academic skills, and gain extensive hands-on practice with key software.
- Assessed via coursework no formal examinations.
- An experience of conducting a substantial independent research project (MSc only), written in the form of a research journal article (which may, with agreement of your supervisor, be submitted for publication).
- An option to pay fee by installments.

## NEXT INTAKE: SEPTEMBER 2021

### Get (more) inspired

Remote sensing, GIS and geospatial technologies underpin a rapidly growing, multi-billion dollar industry, and are becoming increasingly mainstream within both the public and private sectors, resulting in a need for graduates who have a combination of theoretical knowledge and practical skills. Participants and graduates of this course could seek employment in a variety of remote sensing/GIS-related roles such as analysts, scientists, consultants, project managers, surveyors, data specialists, technicians, mapping officers, development, sales and marketing, customer support, GIS training, lecturing and research (including funded PhD projects). The breadth of potential uses of remote sensing and GIS ensures a great diversity of job opportunities; for example, our GIS graduates have found employment with mapping agencies, GIS and SatNav companies, environmental consultancies, ecological and marine resource management and environmental agencies, renewable energy companies, forestry, fisheries, town planning departments, heritage agencies, health and emergency services, housing authorities, local government, aid agencies, countryside recreation, rural development, retail analysis, utilities and infrastructure, Further and Higher Education, mining and mineral exploitation and the oil industry, among others. Knowledge and understanding of geospatial data is also increasingly required in a variety of jobs outside of the GI profession, making remote sensing and GIS qualifications valuable for enhancing employability in a range of fields.

### Hear our GIS course graduates:

"Getting a job with a GIS company, being promoted within a year and implementing skills learned ... [and having] the confidence that I can pursue more challenging and complex GIS tasks should be evidence that the course is a success."

"The course met my expectations and more.... A big thank you to all the staff and fellow students who helped with great support. I have thoroughly enjoyed the experience."

### Fees (further details and discount information available here)

- International students, year of admission from 2021/22, click here
- Northern Ireland / Republic of Ireland students, year of admission from 2021/22, click here
- Great Britain students, year of admission from 2021/22, click here

Don't need a PG or MSc, why not enrol for individual module/s of your choice!

