School of Geography and Environmental Sciences

Established provider of online distance learning postgraduate courses

Geographic Information Systems by Online Distance Learning

Study for a PG Certificate, PG Diploma or Masters, full-time or part-time

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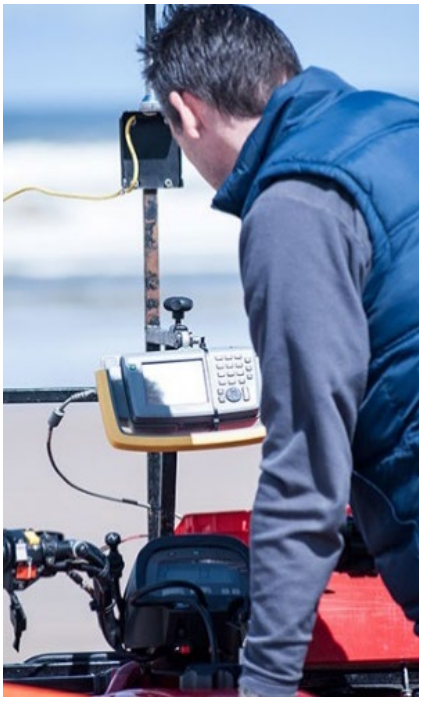

OVERVIEW

The School of Geography and Environmental Sciences at Ulster University offers a fully online, distance learning, postgraduate course in Geographic Information Systems. With over 25 years' experience in teaching GIS, and nearly 20 years of teaching this course via e-learning, we have a significant and successful track record in GIS education.

You can choose to study for the award of Postgraduate Certificate, Postgraduate Diploma or Master of Science, and may do so either full-time or part-time.

COURSE HIGHLIGHTS

- Join an established course with excellent reputation and feedback.
- Get support and advice from experienced lecturers, tutors, librarians, e-learning and IT staff.
- Access a wide range of online resources such as e-books, digital lectures and podcasts, discussion boards and video-conference tools all within a dedicated e-learning platform.
- Develop and improve your employability, professional and academic skills and gain extensive hands-on practice with key software.
- Obtain free student copies of GIS, remote sensing and statistical software.
- Be assessed entirely by coursework – there are no formal examinations.

- Pay your fees by instalments.
- With a fully online course, you can study from almost anywhere and there is no need to travel to classes.
- You can enrol to study part-time or full-time and choose the times you study each week to suit yourself.
- Substantial relevant work experience may be accepted in place of standard entry requirements.
- Study for a Master's degree, a PG Diploma, PG Certificate or enrol for individual modules.

WHY STUDY GIS?

In recent years the benefits of using geo-spatial data have become more widely understood within government and business. In parallel, the need for GIS professionals has grown steadily across a wide range of sectors. Moreover, gaining GIS knowledge and skills is increasingly seen as an essential part of preparing for other types of employment, for example in the environmental sector.

Our students fall into two broad groups:

- People who want to enter GIS-related employment for the first time, or who want to add GIS to their skill-set to enhance their employability (often new or recent graduates, but also including people wanting to change career).
- People already in GI-related employment who want to broaden and deepen their GIS knowledge and skills with a view to making better use of GIS or improving career and promotion prospects.

Student feedback shows that our course caters very well to the needs of both groups. You can find out more about graduate careers here.

WHY STUDY WITH US?

The course has been designed to provide a broad-based and hands-on education in the principles and practice of GIS. Core content explores the representation, acquisition, management, analysis and display of spatial data, and also introduces concepts and applications of remote sensing and spatial databases. You can choose from a range of optional modules including web-based GIS, spatial analysis and modelling, GIS for environmental management, programming for GIS, photogrammetry, GIS in the commercial environment and GIS work experience or work-based project. Over the duration of the course you will gain extensive practical experience using a variety of commercial and open source software. In addition to development of core GIS skills using ArcGIS, you will also get hands-on practice with packages such as ERDAS Imagine, Excel, SPSS, QGIS, OpenLayers, GeoServer, PostgreSQL and PostGIS, together with GIS extensions and plug-ins. Programming languages such as HTML, CSS , JavaScript and Python, are introduced in optional modules. If you decide to complete the Masters project you can focus on a topic of your own choosing.

Here are some particular strengths of our course:

Relevance to employment: we place strong emphasis on helping our students develop and improve their academic and professional skills (including practical experience of key software,

problem-solving, data analysis, presentation of information, report writing, critical analysis and independent research) in order to enhance employability and career progression. Our graduates have a very high success rate in securing GI-related employment, and students already in GIS jobs, many of whom are sponsored by their employers to take the course, frequently comment on how useful they find it within their day-to-day work. Extensive hands-on practice using GIS software is central to this. Regular course reviews ensure the continuing relevance of course content in the context of rapid changes in technology and the broader industry, while video presentations by industry specialists give greater insight into not only the technologies but also the management and implementation aspects of GIS. The option to undertake a module in the workplace (subject to placement availability) has proven to be extremely popular and very successful in helping integrate academic experience of GIS with the world of work, further enhancing employability. We maintain a Facebook group for students and graduates of the course to publicise GIS jobs, PhD funding and other career-related opportunities.

Flexibility of study time and location: you can choose to take the course either full-time or part-time. As a fully online distance learning student, you can study from almost anywhere, as long as you have a well specified computer and internet access. The flexibility of e-learning also means that you can continue with the course even if you move to a new location or need to travel as part of your job.

Two intakes per year for part-time study: full-time students begin the course in late September, while part-time students may enrol for a start date of either late September (semester 1) or late January (semester 2).

Three levels of award: you can opt to study for a Postgraduate Certificate, Postgraduate Diploma, or Masters. The PgCert requires passes in four modules, while the PgDip requires a total of eight. Those completing the PgDip have the option of continuing to the Masters, which entails completion of an independent research project.

- The PgCert takes 3-4 months full-time or 8 months part-time;
- The PgDip takes 8 months full-time or 2 academic years part-time;
- The MSc takes 12 months full-time or 3 academic years part-time.

Standalone modules: you may enrol for individual PgDip modules if you wish to study specific topics or only want an introduction to GIS rather than to study for an award (note that a few modules have prerequisites – please see the module summaries for details). You can also transfer your credits if you subsequently decide to enrol for the full PgDip/MSc course.

Virtual Learning Environment: the course is delivered entirely through an e-learning teaching platform, or Virtual Learning Environment (VLE), called Blackboard, through which we provide teaching materials, assignment instructions, links to electronic library resources and other reading materials, as well as discussion boards and other communication tools such as video-conferencing. Teaching materials consist mainly of lectures in various formats (e.g. as illustrated documents or podcasts) and practical exercises (written instructions with screenshots or screencasts), which may be supplemented by additional reading or video content, tutorial exercises, quizzes etc. Each module is supported by academic staff and by experienced tutors with industry and professional knowledge and expertise.

Student experience: feedback from students consistently shows that they find the course both challenging and enjoyable, and that despite studying at a distance, they feel very well supported by teaching staff, librarians, technicians and the course administrators. The fact that many new students join the course on the recommendation of previous students testifies to the satisfaction levels of graduates of the course. You can see some comments from previous students here.

Additional Benefits

- Esri's ArcGIS, Erdas Imagine (Remote Sensing) and SPSS (statistical analysis) provided free of charge to all students.
- Access to the University's electronic library, including e-books, electronic journals and digital extracts from textbooks.
- Ordnance Survey (N. Ireland) prize for best Distinction-level Masters Project.
- Free student membership of the AGI (Association for Geographic Information) and reduced rates for attendance at AGI events.
- Free Student Membership of the Institution of Environmental Sciences (our course is accredited by IES).

COURSE DESCRIPTION

The benefits and efficiencies of using Geographic Information Systems (GIS) are now widely recognised within government, business, education and charities, and the applications of Geographic Information and GI technologies are steadily growing. Using GIS, it is possible to combine data from a broad range of sources and in a variety of formats, such as paper and digital maps, routinely collected administrative data, censuses and population surveys, satellite imagery, aerial photography, GPS tracking and surveys, LiDAR and crowd-sourcing. This course is designed to give students (whether newly qualified or already in employment in related fields) understanding and experience of GIS concepts, functionality and applications, data models and data management, GIS programming, spatial data analysis and project management, as well as providing extensive hands-on experience of commercial and open-source GIS software. Strong industry links help ensure that course content remains relevant to the needs of employers.

The uses of GIS are very diverse, and include mapping, spatial analysis, planning and decision-making within a wide range of disciplines and sectors – common examples include environmental management and conservation, resource management, emergency service planning and humanitarian assistance, health care provision, land use planning and urban development, the utilities, transport, geo-demographics, mineral extraction and retail analysis. Increasing uptake of GIS and associated techniques and technologies means that there is a growing demand for qualified personnel who have the skills to manage spatial data effectively.

The Postgraduate Diploma course comprises four compulsory modules with a further four options. The compulsory modules are Principles of GIS, Spatial Data Management, Introduction to Remote Sensing, and GIS Databases. The following optional modules are currently available: Web-based GIS, Spatial Analysis and Modelling, Programming for GIS and Remote Sensing, GIS in Business and Society, GIS Work Experience / GIS Work-based Project, Photogrammetry and Advanced Image Analysis and GIS for Environmental Management – however, please note that there are constraints on the combinations possible due to module timing. More information on module timing is available here.

Students wishing to graduate with the award of Postgraduate Certificate rather than completing the PgDip or MSc must pass four modules including Principles of GIS.

Modules consist of a combination of lectures and related practical work, ensuring that the theory and concepts introduced are reinforced by hands-on experience, using real-world examples drawn from a variety of subject areas. Students gain considerable experience of commercial and open-source GIS and remote sensing software, and skills such as problem-solving and academic report writing are extensively practiced. Modules are assessed by coursework such as project reports, practical write-ups, presentations and online discussions, quizzes and tests. There are no formal university examinations.

The Masters degree in Geographic Information Systems consists of the eight taught modules of the Postgraduate Diploma in addition to a substantial piece of independent research, presented in the form of a research paper which may, with the agreement of your supervisor, be submitted for publication by an academic journal.

Option to combine GIS and environmental management
If you are interested in studying modules in both GIS and environmental management, you have the following options:

- Enrol for the GIS PgDip/MSc and take one 30-credit environmental management module (Biodiversity Management or Environmental Impact Assessment, which run in alternate years) in place of two 15-credit optional modules, OR;
- Enrol for the "GIS with Environmental Management" PgDip/MSc course, which allows you to take more environmental management modules along with some GIS modules.

Details of the Environmental Management with GIS course are available at www.ulsteruniges.com/postgrad.

MODULE SUMMARIES

Please note that module content is reviewed and updated on an annual basis and the content described here is subject to minor modifications.

(i) Postgraduate Diploma Core Modules: GI Industry strand

Principles of GIS (EGM711) Semester 1, weeks 1-6
This module introduces the theory and practice of Geographic Information Systems, reviewing the breadth of potential GIS applications and equipping students with the key concepts and skills required relating to the input, management, manipulation, analysis and output of spatial data. Lecture-based teaching of key concepts is reinforced by linked practical exercises developing skills in ESRI's ArcGIS. The module assumes no prior knowledge or experience of GIS.

Spatial Data Management (EGM712) Semester 1, weeks 7-12
This module builds on the knowledge and practical skills gained in EGM711 to provide further experience in the acquisition and management of spatial data. Methods for generating and integrating digital spatial data from primary and secondary sources are considered, with lecture and practical sessions looking at digitising, geo-registration, data collection (e.g. GPS and LiDAR) and using secondary sources such as the Census and government population statistics. The

module also incorporates extensive practice in data handling, GIS functionality and analysis and statistics. Development of GIS software skills focuses primarily on ArcGIS, while the SPSS package is used to introduce statistical analysis of GIS data. EGM711 is a prerequisite for EGM712.

Introduction to Remote Sensing (EGM713) Semester 1, weeks 1-6
This module gives students a thorough grounding in digital remote sensing and analysis techniques. The module explores the theoretical principles of the discipline and is supported by the industry standard remote sensing software package ERDAS Imagine. Practical knowledge of remote sensing and image analysis is developed through a series of practical exercises and a project.

GIS Databases (EGM717) Semester 1, weeks 7-12
This module introduces the concept of developing a reliable spatial database for use in any organisation and provides an insight into both small scale and large scale relational spatial database management systems. A range of database skills are introduced which equip the student with knowledge of the potential and scope of databases within a range of different applications. Students are introduced to a range of open-source DBMS and GIS software including PostgreSQL, PostGIS and QGIS.

All students also choose four optional modules from the list below to complete the PgDip. Note that part-time students starting the course in semester 2 (January intake) have more restricted options due to the timing of prerequisite modules.

(ii) Postgraduate Diploma Optional Modules

Web-based GIS (EGM715) Semester 2, weeks 1-6
This module provides an introduction to programming for GIS using HTML, CSS, JavaScript and servers for web-based GI systems such as OpenLayers and Geoserver. The course introduces programming fundamentals such as web pages, customisation and GIS applications. Students are encouraged to consider important elements of interface design to facilitate the use of GIS applications. The module culminates in the design and implementation of a website using Virtual Machines.

Spatial Analysis and Modelling (EGM716) Semester 2, weeks 1-6
This module, which builds on the overview of GIS analysis gained in modules EGM711 and EGM712, introduces concepts of spatial data analysis and modelling, including quantifying clustering and autocorrelation and understanding the impact of scale and aggregation on area-based analysis. It also aims to develop and expand expertise in statistical analysis and problem-solving in a GIS context. Further practical experience is developed of ArcGIS, ArcGIS extensions and open-source software. EGM711 and EGM712 are prerequisites for EGM716.

Photogrammetry and Advanced Image Analysis (EGM702) Semester 2, weeks 1-6
This module covers advanced topics in visible remote sensing and image analysis, including photogrammetry and digital elevation models, image processing and manipulation, advanced classification techniques such as object-based image analysis (OBIA), and time series analysis and change detection using Google Earth Engine.

Programming for GIS and Remote Sensing (EGM722) Semester 2, weeks 7-12
This module develops programming skills using the python programming language. The module

seeks to provide students with key skills in the development of repeatable, automated analyses of GIS applications. The module also aims to develop academic skills in preparation for the Masters.

GIS in Business and Society (EGM714) Semester 2, weeks 7-12
This module investigates the GI industry from the perspective of the GI professional, the GI customer/user and the various functions and processes behind the successful implementation of GIS in real world scenarios. The module aims to give students a firm understanding of GIS in the commercial world, an appreciation of the economic and social value of spatial data and the importance of decision-based techniques in spatial analysis within GIS applications.

GIS for Environmental Management (EGM721) Semester 2, weeks 7-12
GIS has been established as a powerful environmental planning tool given the inherent geographical nature of environmental systems and the impacts on them. This optional module provides theoretical background and practical skills relevant to environmental modelling and management, with an emphasis on independent learning. The research focus of this module helps prepare students for undertaking the Masters project. EGM711 and EGM712 are prerequisites for EGM721.

GIS Work Experience (EGM725): available to students who are not in full-time employment
There is increasing emphasis within university education on preparing students for the workplace, and graduate employers place great value on relevant work experience. This module provides the opportunity to engage in a short GI-related work placement, complementing academic education with experience of working in a professional environment. This allows students to apply knowledge and skills obtained through earlier taught modules in a professional setting, contextualising classroom-based learning with real-world experience. Previous placements have been hosted by a wide range of organisations including Ordnance Survey NI and OSi, government departments, local Councils, educational institutions, charities and private businesses focusing on GIS and mapping, among others. EGM711 and EGM712 are prerequisites for EGM725.

GIS Workplace Project (EGM726): available to students who are employed in a GIS-related role
This module gives students who are already in employment the opportunity to apply knowledge and skills obtained through a combination of taught modules and experiential learning in a professional setting, undertaking a systematic analysis of the role and implementation of GIS and/or GI-related data and technologies within their workplace and to identify, develop and evaluate a project demonstrating the potential for expanded or more in-depth applications of GIS. EGM711 and EGM712 are prerequisites for EGM726.

Most of the optional modules above run for a specific 6-week period, i.e. weeks 1-6 or weeks 7-12 of Semester 2, so some module combinations are not possible as you need to select modules from both the first and second half of the semester. However, the GIS Work Experience and GIS Workplace Project modules can be arranged for either weeks 1-6 or 7-12.

(iii) Postgraduate Diploma: Environment strand

Students opting for the Environment strand take a 30 credit environmental management module in place of two of the 15 credit GIS optional modules: EITHER Biodiversity Management (EGM801) OR Environmental Impact Assessment (EGM804). These modules run in alternate years – EGM801 in 2021-22 and EGM804 in 2022-23.

Biodiversity Management (EGM801)
This module shows students how a structured approach to biodiversity assessment and habitat management can achieve effective conservation and ecological restoration at site and landscape scales, and aims to provide the scientific knowledge and skills necessary for understanding and implementing site and landscape-scale biodiversity management.

Environmental Impact Assessment (EGM804)
Environmental management plays an important part in policy, planning and decision making in government and industry. Students intending to follow careers in environmental management will need to be aware of how technical, economic and environmental considerations are taken into account in the planning and operation of projects through the use of EIA, Environmental Audits and EMS. This module provides the specific skills needed to perform the key environmental management roles in business and industry.

THE MASTERS PROJECT

Once you have completed the Postgraduate Diploma modules you can either graduate with the PgDip or continue to the Masters course. The award of Masters requires successful completion of a substantial piece of independent research (Geographic Information Systems Project, EGM701). The Masters project is assessed through a combination of research proposal, progress reports and final research paper (which may, with the agreement of your supervisor, be submitted for publication by an academic journal).

The following examples of recent MSc projects illustrate the breadth of research topics:

- A geospatial multi-criteria decision approach to wind farm site selection
- A GIS based approach to assessing and quantifying privacy levels of residential gardens on proposed residential developments
- A GIS based Flooding Vulnerability Index for river catchments
- A GIS based model for property valuation
- A public participation geographic information system for emergency management
- A quantitative assessment of the quality of the OpenStreetMap primary route network across urban areas of Africa
- A spatial investigation into the relationship between the gas network and fuel poverty
- A spatial modelling approach to the investigation of 16th/17th Century sieges
- A study into the effectiveness of GIS in the analysis and prediction of risk towards built heritage
- Access and inequality issues in primary health care
- An assessment of the potential of biomass
- An evaluation of the ability of a GIS to model areas of potential soil carbon sequestration on a regional scale
- An evaluation of Geographic Information Systems within a Borough Council
- An evaluation of GIS for the predictive modelling and mapping of potential juvenile lamprey habitat
- An investigation into the use of GIS and high-resolution SAR data to create a national flood event database
- An investigation into the visualisation and analysis of large amounts of spatially enabled data
- An investigation of the spatial distribution of ambulance calls

- Assessing urban liveability through geographic accessibility
- Big Earth Data for near-real time deforestation monitoring: a fusion approach with Sentinel data using Google Earth Engine
- Building detection using point clouds from LiDAR and CIR imagery
- Catching the cold: an analysis of the efficiency of anti-fuel poverty schemes using GIS
- Changes in Nitrogen Dioxide Levels during the Covid-19 pandemic in the U.S.
- Comparison of road traffic collisions using Kernel Density, Moran's I and Getis-Ord Gi*
- COVID-19 pandemic and social vulnerability in the United States
- Detection of hedgerows and linear boundaries from Digital Surface Models
- Developing a Location Based Service to enhance learner engagement in Outdoor Education
- Development of a GIS tool for modelling noise propagation in natural ecosystems
- Effects of sea level rise on habitats of Clew Bay
- Estimating MNI: close range photogrammetry and GIS applied to the documentation of an archaeological church ossuary in Transylvania
- Evaluating the effectiveness of data fusion in producing a high-resolution multispectral land cover map of Northern Ireland
- Exploring the past with GIS: analysing the distribution and setting of Irish Megalithic tombs
- GIS in the mineral exploration industry
- Identification of areas susceptible to flooding within the Boyne catchment using frequency ratio analysis
- Identifying vulnerability of a coastline to sea level rise
- Investigating fuel poverty in Derby using remote sensing and socio-economic data
- Investigation of the suitability of GIS and remotely-sensed datasets for photovoltaic modelling on building rooftops
- Investigations into erroneous contributions in Volunteered Geographic Information: the case of OpenStreetMap
- Laser scanning versus still image photogrammetry point clouds: a comparative analysis of remotely sensed data for the subsea industry
- Mapping ecological light pollution of a landscape by vehicle headlights
- Modelling and mapping the risk of malaria using GIS and Remote Sensing by applying weighted overlay analysis
- Modelling native woodland expansion in Loch Lomond and the Trossachs National Park
- Modelling the susceptibility of coral reefs within the Seychelles archipelago in relation to coral bleaching using a GIS-based Fuzzy-Analytical Hierarchy Process and Spatial Principal Component Analysis
- Modelling the relationship between night-time light imagery and socio-economic indicators in India
- Monitoring the impact of a seawater inundation on a coastal agricultural area
- Representing the flight of refugees: a user study of thematic maps
- Sensitivity of bud burst in key tree species in the UK to recent climate variability and change
- Spatial modelling of methane emissions from agricultural livestock with consideration to future food security
- The development and application of a GIS platform for the prediction and modelling of chemical, biological, radiological and explosive cordon and evacuation distances
- The development of a GIS based hazard potential index for the overtopping of glacial lakes
- The impact of artisanal and large-scale mining on forestation in the Wassa West area, Ghana

- The Road Mobility Index (RMI): road mobility as a development indicator (a worldwide analysis)
  Understanding differences between fisher ecological knowledge and Vessel Monitoring System data
- Use of Land Cover Map to determine the impact of rural residential development on Broad Habitats at the landscape scale
- Using GIS and Multi-Criteria Decision Making (MCDM) for solar farm site selection
- Using GIS and Remote Sensing to map urban growth associated with socioeconomic and geopolitical change in Tartus, Syria
- Using GIS, RS and very high spatial resolution (VHSR) drone imagery to assess whether the Kutupalong-Balukhali extension site Rohingya refugee camp in the Cox's Bazar district of Bangladesh meets UNHCR minimum standards
- Using GIS to assess noise levels in an urban environment
- Utilizing Geographical Information Systems in evaluating the accessibility of public transport supply in Dublin's Western Periphery
- Variability in kelp biomass on the nearshore coasts of the Isles of Scilly, Cornwall, evaluated against modelled predictions, aerial imagery and environmental pressures

MODULE TIMING

Teaching takes place between late September and mid-December (semester 1) and late January to the end of April (semester 2); please note that coursework deadlines may extend until early January (semester 1) and mid-May (semester 2). Module timings for full-time and part-time students are shown below. Note that part-time students starting the course in semester 2 (January intake) have more restricted options due to the timing of prerequisite modules.

Table 1: Timing of modules for FULL-TIME students

Semester	Weeks	Module Name	Code	Approx. Timing
1	1 - 6	Principles of GIS	EGM711	late Sept-early Nov
1	1 - 6	Introduction to Remote Sensing	EGM713	late Sept-early Nov
1	7 - 12	Spatial Data Management	EGM712	early Nov-mid Dec
1	7 - 12	GIS Databases	EGM717	early Nov-mid Dec
Vacation (January)				
2	1 - 6	TWO of: Web-based GIS Photogram. & Advanced Image Analysis Spatial Analysis and Modelling GIS Work Experience	 EGM715 EGM702 EGM716 EGM725	late Jan-early March
2	7 - 12	TWO of: GIS in Business & Society GIS for Environmental Management Programming for GIS & RS GIS Work Experience	 EGM714 EGM721 EGM722 EGM725	early March- end April
Environmental Strand: 2x15-credit modules replaced by EGM801 or EGM804 (Environmental Management PgDip core module), running alternate years (weeks 1 - 12 of semester 2)				
Award of PgDip OR Transfer to Masters				
3		GIS Masters Project	EGM701	early June-mid Sept

Table 2: Timing of modules for PART-TIME students, SEMESTER 1 START

Year / Semester	Weeks	Module Name	Code	Approx. Timing
1 / 1	1 - 6	Principles of GIS	EGM711	late Sept-early Nov
1 / 1	7 - 12	Spatial Data Management	EGM712	early Nov-mid Dec
Vacation (January)				
1 / 2	1 - 6	ONE of: Web-based GIS Spatial Analysis and Modelling	 EGM715 EGM716	late Jan-early March
1 / 2	7 - 12	ONE of: GIS in Business & Society GIS for Env. Management Programming for GIS & RS	 EGM714 EGM721 EGM722	early March- end April
Environmental Strand: 2x15-credit modules replaced by EGM801 or EGM804 (Environmental Management PgDip core module), running alternate years (weeks 1 - 12 of semester 2)				
Vacation (June-September)				
2 / 1	1 - 6	Introduction to Remote Sensing	EGM713	late Sept-early Nov
2 / 1	7 - 12	GIS Databases	EGM717	early Nov-mid Dec
Vacation (January)				
2 / 2	1 - 6	ONE of: Web-based GIS Photogram. & Advanced Image Analysis Spatial Analysis and Modelling GIS Work Experience * GIS Workplace Project *	 EGM715 EGM702 EGM716 EGM725 EGM726	late Jan-early March
2 / 2	7 – 12	ONE of: GIS in Business & Society GIS for Environmental Management Programming for GIS & RS GIS Work Experience * GIS Workplace Project *	 EGM714 EGM721 EGM722 EGM725 EGM726	early March-end April
Award of PgDip OR Transfer to Masters				
3		GIS Masters Project	EGM701	early June-mid Sept

** You may not enrol for both GIS Work Experience and GIS Workplace Project modules*

Table 3: Timing of modules for PART-TIME students, SEMESTER 2 START

Year / Semester	Weeks	Module Name	Code	Approx. Timing
1 / 2	1 - 6	Web-based GIS	EGM715	late Jan-early March
1 / 2	7 - 12	GIS in Business & Society	EGM714	early March-end April
Environmental Strand: 2x15-credit modules replaced by EGM801 or EGM804 (Environmental Management PgDip core module), running alternate years (weeks 1 - 12 of semester 2)				
Vacation (June-September)				
1 / 1	1 - 6	Principles of GIS	EGM711	late Sept-early Nov
1 / 1	7 - 12	Spatial Data Management	EGM712	early Nov-mid Dec
Vacation (January)				

2 / 2	1 - 6	ONE of: Spatial Analysis and Modelling GIS Work Experience * GIS Workplace Project *	 EGM716 EGM725 EGM726	late Jan-early March
2 / 2	7 – 12	ONE of: GIS for Environmental Management Programming for GIS & RS GIS Work Experience * GIS Workplace Project *	 EGM721 EGM722 EGM725 EGM726	early March-end April
Vacation (June-September)				
2 / 1	1 - 6	Introduction to Remote Sensing	EGM713	late Sept-early Nov
2 / 1	7 - 12	GIS Databases	EGM717	early Nov-mid Dec
Award of PgDip OR Transfer to Masters				
3		GIS Masters Project	EGM701	late Jan-end Nov

** You may not enrol for both GIS Work Experience and GIS Workplace Project modules*

CAREERS AND GRADUATE PROFILES

What are the employment prospects for GIS graduates?

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 a steady supply of graduates who have a combination of theoretical knowledge and practical skills. Graduates of the course have secured employment in a variety of roles worldwide, in GIS positions including technicians, analysts, scientists, surveyors, data specialists, mapping officers, consultants and project managers, development, sales and marketing, customer support, GIS training, lecturing and research (including funded PhD projects). The breadth of potential uses of GIS ensures a great diversity of job opportunities; for example, our graduates have found employment with mapping agencies, GIS, SatNav and technology companies, GIS and 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 experience of geo-spatial data are also increasingly required in a variety of jobs outside of the GI profession, making a GIS qualification a valuable asset enhancing employability in a range of fields.

Our students come from a wide range of backgrounds. Some join the course soon after completing their undergraduate degree with a view to entering GIS employment, while others study with us in order to change career or gain promotion within a current role. Here are some profiles of our graduates, to give you a bit more detail about what our course can lead on to.

Lee Powell: GIS Consultant

As I had already been working in the GIS sector for 10 years when starting the course, I believed that the MSc in GIS at Ulster would have very little to teach me. I was wrong. Despite having already acquired some of the software knowledge (particularly of tool functionality) throughout my ten-year career I was astounded at how much the course had to offer. I learned an enormous amount about the application of GIS and it's benefits to engineering, agriculture, local and national government, retail, the environment, ecology, politics, business, health and social care… the list goes on! The MSc in GIS has taught me the value

of geographic information systems in a real-world context and has ignited a passion for me in GIS that I didn't have prior to starting the course. I started the course with very little academic experience (which was a worry to me) but with the help and guidance of the university staff I have produced academic work to master's level that I am incredibly proud of, as well as learning new techniques and practical application of GIS I had yet to see throughout my career. The course has been instrumental in me transitioning into my new role as a GIS consultant for a world leading GIS solutions company. It has given me the required knowledge and confidence in how best to apply technical GIS applications to the benefit of any organization. I would recommend this course to anybody with a passion for geography or computing, even if you already have years of employment in the world of GIS!

Lucy Arnold: Environmental Consultant (Nevis Environmental)
I graduated with a BSc (Hons) in Biological Sciences in 1989 and started a career in conservation and ecology working for a variety of environmental organisations and ecology based charities. After moving to Ireland and setting up my own environmental consultancy, I decided I wanted to take a slightly different route and to further develop my GIS skills. I enrolled on the MSc GIS Distance Learning course at the University of Ulster in 2003 so I could continue working whilst studying and achieved a Pass with Distinction in 2006, as well as winning the Ordnance Survey Northern Ireland "Award for Outstanding Contribution to GIS" for my Masters dissertation. I continue to work in the ecological sphere, now as Head of GIS and Data Management for Nevis Environmental, an environmental consultancy based in Scotland with ecological expertise in both land-based and marine projects. My work is varied, which I love, and involves everything from building and maintaining our database, to providing training on GIS software, as well as undertaking GIS analyses for the ecologists in the organisation. My main role is to progress the business forward strategically regarding GIS and data management. This means that I am involved in the innovation, research and development side of things; finding solutions and looking at ways to commercialise them for our business. The Masters course at the University of Ulster course gave me an invaluable foundation on which I have built my career in GIS. The flexibility of the distance learning really worked for me; I could fit my studies around when I needed to work. I never felt as though I was missing out not being on campus, I had access to a vast library of information, and the discussion forum helped me stay in contact with other people. All the course materials were detailed and of high quality, and the feedback and support I got from staff was always clear and useful. The whole course structure and content really worked for me and I achieved a better result than I thought I was capable of!

Marcos Moreu: PhD researcher
The first time I used a GIS was while collaborating, during my last year of a BSc in Mechanical Engineering in Spain, with an NGO in El Salvador in WASH (Water, Sanitation and Hygiene) related projects. After that experience I decided to improve my skills in GIS and the MSc offered by Ulster University was the best option I found in the UK for studying online and part-time while working in the hospitality sector. I completed the PgDip between 2013 and 2015, and the MSc in 2018. It's been an extremely valuable learning experience of which I would like to highlight and thank for the flexibility and support provided. Completing the PgDip at UU gave me the opportunity to find a job as a GIS technician in a UK based Geospatial company and later on in an international organisation working on Disaster Management related projects in East Africa. After the two above mentioned working experiences I enrolled to the MSc Project module, of which I would like to highlight the freedom and the encouragement received when developing the project proposal, both in terms of topics and tools. Completing the MSc Project has been key to gain a scholarship for a PhD project in Geography.

Nicolas Moity: Researcher in Marine Sciences & GIS (Charles Darwin Foundation, Galapagos)
I graduated in 2002 with a BSc in Biology. After a Postgraduate Diploma in Biodiversity with emphasis in conservation and management of species and their habitats, I started a career in conservation and ecology

working in a variety of environmental organizations and as a university researcher. After some years I felt I needed to boost my career by widening my skills and knowledge in spatial analysis and modelling, which are the perfect complement to the ecologist tool-kit. I went on to complete a Postgraduate Diploma in Remote Sensing, followed by the Masters in GIS (with Distinction) at Ulster. The range of capacities increased immediately and right after graduating I got a placement in geospatial research in a highly prestigious European FP7 project. I was then offered a position in Australia but decided to move to the Galapagos Islands instead to live one of the biologists' dream jobs. I work as a marine scientist and geospatial expert at the Charles Darwin Foundation in the Galapagos. My research provides the knowledge to ensure the conservation of biodiversity and the sustainable use of the ecosystems of the Galapagos Archipelago. Even though I went through several postgraduate studies, the MSc in GIS at Ulster was the game changer. I learned new skills in the geospatial fields, including spatial modelling, but most importantly I learned how to excel as a scientist. The Masters pushed my own limits far beyond what I was looking for when enrolling (i.e. learning GIS). The skills I learned in academic writing, critical thinking and problem solving are still impacting the work I do on a daily basis and... it was also a lot of fun!

Hadi Alsawad: Senior GIS Analyst (Saudi Aramco)
Before taking the GIS Masters, which I completed in 2013 by Distance Learning, I was employed as a cartographer in the Advisory Unit of Land Affairs Department, Saudi Aramco (Saudi's national oil company). I was promoted immediately after the course to a senior GIS analyst position, and I am currently the acting supervisor of the Advisory Unit in Saudi Aramco. The flexibility of the course allowed me not only to keep my job, but also to become a senior GIS analyst in my unit. Subsequently, top management nominated me for a scholarship to do a part-time MBA from Hong Kong University of Science and Technology.

Natalie Cozzolino: GIS analyst (SSE Renewables)
I started the distance learning GIS PGDip in January 2013 as a second term start. Before the GIS PGDip I had tried to find a job in the environmental sector using my BSc Geography and also an MSc Ecotourism, but was unsuccessful, and it was at this point that I decided I needed to develop a specialised focus. I decided to concentrate on GIS and am very happy with my decision to do so. I found the course to be interesting, stimulating and challenging, and I enjoyed leaning the theory and participating in practical work. One of the more attractive elements of this course was that it catered for people from a wide variety of backgrounds. I don’t come from an IT background, but I didn’t find that it held me back at all. After graduating from the GIS PGDip I decided to continue to the MSc and wrote a thesis looking at the use of GIS in modelling woodland expansion. Whilst undertaking this project I began to look for jobs, and was overwhelmed by how easily I was getting interview invitations. Previously I hadn’t been successful in obtaining any invites to interview, but now with a PGDip in GIS, I was invited to three interviews within the space of a month, and was successfully appointed the position of GIS Analyst at SSE renewables. My experience of the PGDip/MSc GIS at the University of Ulster has been an excellent one and I cannot recommend choosing this course highly enough. I feel it has equipped me with the skills to now go on and develop a career in GIS.

Kate O’Loan: GIS Analyst (Jacobs, Sydney)
After completing a degree in Geography (and assuring friends and family that in fact I didn’t want to go on to do "my teaching") I enrolled for the Full time on campus GIS MSc at University of Ulster Coleraine in 2006/07. I was able to secure a job before graduation at a data management company within the land registry of Northern Ireland, I worked there for a short period of time before moving to Glasgow to work for Jacobs, a large engineering consultancy. This was great experience for a graduate- I worked full time on a large asset management project and was involved in all aspects of the project from GIS tasks to program management and on-site training in India. After 18 months at Jacobs I moved to Sydney and having some experience as well as a Masters Qualification I found it relatively easy to get a GIS role. I worked at a small company specialising in property and location data for 18 months. At this stage I wanted to get more

experience in mapping and Spatial Analysis and went back to Engineering Consultancy in a GIS Analyst role. I have worked at SKM/Jacobs in Sydney now for nearly 5 years on a wide range of projects. This summer my employer is sponsoring me to do a 6 week course at the University of Twente in the Netherlands in Disaster Risk management and Environmental Assessment for Spatial Planning – contemporary issues and something I am really interested in. I am extremely excited to be going back to study again, not least as a result of the thoroughly positive experience I had at the University of Ulster Coleraine. I highly recommend the PGDip/MSc GIS at the University of Ulster, it provided me with an excellent grounding in GIS concepts and practical experience that I could take directly into the workplace.

Paul Fearon: GIS & Spatial Systems Analyst (AECOM, New Zealand)
I graduated with a BSc (Hons) Geography (2008) and an MSc in GIS (2009) from the University of Ulster. I now work for AECOM in New Zealand, where I am involved in all GIS aspects of a major Fortune 500 engineering consultancy firm operating on a global scale. My work is wide ranging. I have been involved in hydro dams construction throughout the Asia-Pacific region, major transport and rail projects from electrification to a new subway, flood hazard modelling and mapping, aviation projects and mining projects in Australia to name but a few. I would really recommend furthering your education and going on to do a postgraduate course. I thoroughly enjoyed my PG study in GIS. I learned much more about myself and what my strengths and weakness are than I ever could whilst studying as an undergraduate. The relationships you form with the lecturers are a great stepping stone to full time professional work as they get to know you and your abilities better. In the current climate with copious amounts of graduates flooding the already saturated job market each year the only way to ensure you get the job you want is to give yourself a leg up. Completing a PG degree gives you great life skills. Potential employers realise that you are willing to work hard for what you want and will be a benefit to their company. I left Ulster in 2009 and now I am in New Zealand. I honestly don't think I'd be here on a regular degree.

Paul Brennan: GIS specialist (Mott MacDonald)
I took a degree in Geology at UCD and, following a student placement with the Geological Survey of Ireland which introduced me to GIS, I gained additional experience through ESRI and via voluntary work, which led to a 6 month contract. I undertook the GIS course at Ulster during 2009-10, and after graduating worked for Teck Resources in Wicklow in a GIS/Geologist industry research capacity. This was followed by a year working for the same company in the Yukon, working in the field (living in a camp!) as a GIS-Geologist. After this I worked for the ICON Group, contracted to the ROI Department of Agriculture, digitising and performing quality checks on field boundary data for EU single farm payments scheme, and am currently employed as an environmental scientist / GIS specialist with Mott MacDonald Ireland, working with the environmental section, doing spatial analysis, spatial data management and map production. Doing the GIS Masters course has definitely helped my career. It qualified me for several jobs which I would never have had the skills to perform with just an education in Geology. Geology is an inherently spatial discipline, so strong GIS skills are a definite plus in that industry. GIS is such a multidisciplinary tool that it has allowed me to get jobs in Environmental Science, Agricultural Monitoring and with an engineering company.

Alison McCabe: Senior Geographical Analyst (HERE Technologies)
I achieved a 2:1 in BSc Hons Geography in 2009 at the University of Ulster and the following year went on to complete the Post Graduate Diploma in GIS. I decided to undertake to Post Graduate course in GIS as I thoroughly enjoyed the GIS topic I had studied during my Geography degree. Additionally at that time the recession had started to take grip in Northern Ireland and there was a lack of Graduate jobs, therefore I took the decision to specialize in GIS to improve my chances of getting a job. After I completed my PG DIP in GIS in June 2010 I first started employment as a Geographical Analyst with Navteq in September 2010 in Newry, County Down. I was initially employed on a year-long temporary contract, this was extended numerous times until the temporary position expired in August 2012. During my time at Navteq I was

responsible for the building, enhancement and maintenance of NAVTEQ's digital maps database in Northern Ireland and the Republic of Ireland as part of the Newry field team. This involved the collection of data with GPS enabled field collection vehicles for road updates, along with coding in the live database utilizing other sourcing such as satellite imagery and addressing databases e.g. Pointer & Geodirectory. Following my departure from Navteq I started with Land and Property Services in the same month, where I worked as a Mapping and Charting Officer in the Pointer Team on a temporary contract. This involved updating and maintaining the Pointer database, an addressing database for Northern Ireland. At first I worked as part of a support team to work through numerous data backlogs and once these had been cleared I moved on to solving addressing queries sent in by surveyors, the Valuation teams and Local Councils. In March 2013 I was approached by my previous employers Navteq, now known as HERE Maps, a Nokia Business and was offered a permanent full time positon with the company where I have been working since. I found the GIS course essential in my career and helped me gain employment when I left University. Many positions required a Post Graduate level qualification as an essential criteria for job application.

Patricia Doran: Hydraulic Modeller (Mouchel)
I graduated from Ulster University with a 2:1 in Geography (2009) and a PgDip in GIS (2010). Following this I worked for Northern Ireland Water (NIW) as a GIS technician, using skills I had gained at university I applied them to different GIS software. This provided the groundwork for my current positon as a hydraulic modeller with civil engineering company, Mouchel, where I am responsible for the construction and calibration of hydraulic models based on NIW's supply network across the whole of Northern Ireland. More recently I have been using these models to carry out analysis on the network to assist NIW with their Watermain Rehabilitation Framework (WMRF) by testing the impact their proposed rehab changes has on the downstream network. Alongside this I am also completing an online course with World Bank Group on 'Designing and implementing successful water utility reform' and working towards chartership with the Institute of Water.

Pamela McQuillan (née Livingstone): GIS Consultant (Sopra Steria)
I graduated in 2009 with a 2:2 BSc Hons in Geography before going on to complete a PGDip in GIS the following year. My undergraduate and postgraduate studies at University of Ulster greatly enhanced my knowledge and experience of GIS and gave me a strong foundation for taking my knowledge further into the workplace. After my time spent at UUC I took up the posts firstly of GIS Technician and later GIS Data Analyst within Northern Ireland Water over a period of 4 years from 2011 through 2015. Here I was responsible for digitising new and existing above and below ground water and sewer assets onto the company's corporate GIS. I also had the task of responding to internal and external data requests through querying of the asset register. Since October 2015, I have been working for Sopra Steria as a GIS Consultant on a range of Public and Private sector client GIS projects.

Kathryn McNair: GI Consultant (Land and Property Services)
I graduated with a first class honours degree in Geography in 2009 and then completed a masters with distinction in GIS in 2011. Straight after the course I worked with Derry City Council for 6 months developing an online mapping viewer. I then spent 8 months working in South West College on an environmental research project using GIS. Since then I have been working for LPS as a GI Consultant out posted to South Eastern Regional College. Without having completed my MSc I would not have been shortlisted for my job in the council which ended up being invaluable experience and a kick-start to my career.

Andrew Boyd: Data Processor (Fugro Survey)
I graduated from Ulster in 2010 with a BSc (2.1) in Marine Science. I subsequently went on to complete an

MSc in GIS at Ulster, with some travelling in between. During my undergraduate degree I found a passion for sea floor mapping and surveying. I am currently employed as a trainee data processor with Fugro Survey in Aberdeen. Working in the marine surveying industry was a natural progression for me with great opportunities to travel, meet new people and spend a lot of time at sea!

Katie McFarland: GIS Consultant (ESRI)
I graduated in 2011 with a first class honours degree in Geography, and continued my postgraduate studies at UU, completing an MSc in GIS. During my MSc I gained valuable work experience through a 6 week placement in Land and Property Services. I also became involved working on a Fuel Poverty project run by the University of Ulster in conjunction with the Department of Social Development (DSD) and the Office of First Minister and Deputy First Minister (OFMDFM). I switched to taking the MSc on a part time basis which allowed me time to work on this project and also complete my Masters dissertation, which was related to the project. I have since worked on several different GIS projects in Northern Ireland Water and Northern Ireland Housing Executive. Since June 2013 I have been working as a GIS Consultant with ESRI Ireland.

Hannah Orr: GIS Project Officer (Gaelectric)
I graduated from Ulster University in 2012 with a 2:1 BSc (Hons) Geography. I then took a 3 month role as a Mapping and Charting Officer with Land and Property Services (LPS) before completing an MSc in Geographic Information Systems (GIS) at Ulster. After completing my MSc I returned to LPS as a Mapping and Charting Officer, mainly working on the Northern Ireland address gazetteer. During my time at LPS I also had the opportunity to work on a GIS Consultancy project with a Council. I subsequently worked for the Northern Ireland Ambulance Service as an Information Analyst which involved performance analysis and use of GIS to assist in performance monitoring and decision making. I am now working with Gaelectric as a GIS Project Officer and predominantly work on Onshore Wind Farm Projects.

Finbar Gillen: GIS Analyst (Northern Ireland Housing Executive)
I graduated in 2013 with a BSc degree in Environmental Planning from Queens University Belfast. I decided to take up the GIS MSc course at UU, to enhance my employability as there seemed to be few opportunities in planning at the time. Despite having no experience in GIS previous to starting the course I found the introductory modules extremely beneficial and helpful. I have gained a lot from the course in terms of learning new types of software and improving my knowledge of GIS in general. I graduated in the summer of 2014 with a post graduate diploma and had intended to do the dissertation in a full time basis over that summer. However, I decided to take up a 10 week internship with GIS company Compass Informatics in Dublin, working alongside the National Transportation Authority in assisting them with the development of the National Cycle Planner. After the 10 weeks were up, I took up a role with engineering firm Mouchel as a project support assistant on the A5 Western Transportation Corridor scheme which involved a lot of GIS work in relation to mapping and amending Vesting Order boundaries, and creating maps for engineers, land owners and Transport NI. I am now employed as a GIS Analyst for the Northern Ireland Housing Executive.

STUDENT FEEDBACK

Here is a selection of comments from past students:

- “Fantastic course, well delivered and structured, with relevant content and interesting assignments. Thoroughly enjoyable.”
- “To date I’ve found all the modules interesting and very enjoyable… Overall I feel the course is assisting my everyday work immensely."
- “Extremely interesting, great selection of modules. Well taught, friendly staff."

- “I really enjoyed the course as a whole, and I really feel that I now have a good foundation for starting a career in GIS."
- “Thanks again for everything, I was very impressed with the quality and delivery of the course and the support from all the staff and fellow students."
- “Despite the fact that the course is distance learning, I do not feel that either my experience or learning have been compromised as a result."
- “Interesting and challenging."
- “The distance learning aspect in general is a major advantage as it allows flexibility for full-time working students with family commitments… the hands-on use of various GIS related software allows in-depth experience of the GI methodologies and research."
- “Again, many thanks for all your assistance over the past three years and I must say this is an absolutely fantastic course."
- “I have already recommended [the course] to several potential students, and will continue to do so."
- “The course exceeded my expectations. So many new skills were learnt including working with spatial data, academic writing, presentations, using GIS software and working with new people."
- “I have not been disappointed with my choice at any point. The course offers comprehensive content, experience and support, in addition to excellent value."
- “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."
- “Well organised and a great variety of content…. lecturers enthusiastic about the course… I found the course stimulating and relevant. It was paced well and I wasn’t overloaded with work but was always busy."
- “I found the course extremely interesting and worthwhile. Great introduction to a wide range of GI applications, functions and skills. I’ve easily been able to transfer what I’ve learnt into my job. I would have no hesitation in recommending this course."
- “I came into the course with no prior knowledge, and considering this, I felt that the basics were very well explained, and at a good rate. I felt like my skills progressed quickly, but with enough detail that I felt I thoroughly learnt the skills…. I have learnt so much from the course, and thoroughly enjoyed it. It has also greatly helped my job prospects."
- “I would definitely recommend the course to prospective students – both to those that are seeking a career in GIS and also those already in jobs where GIS can make a valuable contribution to their work. Overall I found the course very interesting, relevant and challenging. I have been working with GIS in some capacity for the past thirteen years. Nevertheless the course has been very useful and I now have a better insight as to how GIS can be utilised to contribute to business objectives and service delivery in my current workplace."
- “I really enjoyed the course, when leaving after the [my first degree] I didn’t know how I was going to get a job or where my career path was going. The GIS course other than being enjoyable has helped me straighten my thoughts on what I want to achieve in the future. Everything in the course is relevant to what employers are looking for and I would recommend it to anyone."
- “The course has shown me how to do a lot of things which I either never considered or never thought that I would be capable of doing. Along with everything that I have learned I have also gained confidence in tackling new challenges."
- “I'll just take this opportunity to say that I think this course has been brilliant and I think that the teaching staff, lecturers, e-tutors etc. have all been great... I was really impressed

with the level of organisation of this course, especially as a distance learner. I felt well connected with the teaching staff and other students. I thought the course content was excellent and provided a good introduction to using GIS in a professional environment…. Overall I found the course very interesting and enjoyable and am pleased I took part…. I was dubious about taking part in an MSc online, but in fact, I have found the level of organisation better than my previous MSc at a different university where I was an on-campus student!"

- "I would just like to thank you and the rest of the teaching staff for the GIS course. It has given me a firm understanding of GIS and how to use it in a professional way. I continue to use GIS on a daily basis in my work and the course has given me confidence in the GIS work I produce."
- "The course did meet my expectations. I thoroughly enjoyed the modules developing skills and knowledge across various aspects of the GI industry. Beginning the course directly after completing my BSc I did notice a substantial step up in workload and what is expected but felt the first modules at the beginning of the course helped to prepare for further modules. The course is exactly how I expected it and found it extremely interesting and enjoyable…. The course is extremely relevant, well run and fairly assessed and I have found that it has further developed my personal interest in GIS."
- "Extremely dedicated team of lecturers. Throughout the course I have to say all the lecturing staff were excellent providing endless help when required and conveyed information in a straight forward and understanding manner… Course content was spot on in terms of breadth and depth with the early modules being very well geared towards building on the initial basic software skills and academic subject areas."
- "Fantastic level of support from tutors and e-tutors. For me the past experience as a distance learner with the OU meant I had high expectations in terms of the support, feedback on assignments and general accessibility and structure of the course. This course offers all of this, all tutors were quick to respond to queries, offer support and offer constructive feedback. The structure of the course allowed for the development of skills over time with each module adding a new skills(s) as the year progressed. Definitely recommend, as a distance learner I felt very included even though off campus – the discussion forums in particular keep you in touch. The structure and support systems are excellent."
- "Before starting this course, I was a bit sceptical about distance learning. The course has overcome my expectations. The immediate support and the very detailed instructions minimized the intrinsic limitations of distance learning and enhanced its benefits. I am very satisfied with the course."
- "The teaching staff were very approachable and helpful. The course content is very varied and covers all the main topics, giving students an excellent grounding in the principles and applications of GIS. The course has a very strong practical element which I really liked. My aim was to come out of the course having gained new skills that I could immediately apply to my work and to my personal research interests and the course certainly facilitated this. In fact, I have been applying my GIS skills to my work in many ways over the last two years which, considering I had never even used ArcGIS, is saying something."
- "I found the feedback delivered from assignments very useful and referred back to it continuously to identify any weaknesses in my report writing. All the tutors were more than helpful when I approached them for advice…. As a GIS professional who has worked in the industry without the qualification, I have found the course to be both engaging and relevant. The technologies described and used in the practicals were all up to date, and the knowledge obtained has been put to good use within my day to day job."

- “The course has far exceeded my expectations… the course is excellent and will benefit multiple prospective students from a range of different backgrounds… The course is detailed and very enjoyable. I have personally picked up on several skills which I have been able to incorporate into my work environment”
- “The course met my expectations and more. I was put out of my comfort zone a lot with learning new areas… but thoroughly enjoyed every minute. Doing this course has already had a positive impact on my career and a big thank you to all the staff and fellow students who helped with great support. I have thoroughly enjoyed the experience."

You can also see short videos of a few of our distance learning graduates discussing their experiences of the course here.

FREQUENTLY ASKED QUESTIONS

How does a distance learning course work?
Most of the course materials, student support and general study guidance and resources are provided via an e-learning platform called Blackboard. Students download digital versions of their teaching materials (e.g. lectures, documents, podcasts, practical instructions) each week and work through them at their own convenience. Coursework is also submitted via Blackboard. Unlike a traditional classroom environment, students studying online use communication mechanisms such as discussion boards, email or video-conference tools to interact with staff and other students, and are not required to attend the campus at any time during the course (though they are welcome to visit the university to use its facilities or meet with staff).

Many students choose to study by distance learning because they do not have the option of enrolling for an on-campus course, while others prefer the flexibility of time and location afforded by studying online.

What help is available for people studying by distance learning?
The course is taught by our School's academic staff and supported by e-learning tutors. Many of our tutors are graduates of our online Masters, and all are experienced specialists working in relevant occupations (for example in government departments, GIS companies, GIS posts within industry and research positions). Students use the Blackboard to discuss course-related matters with staff and other students, and can contact us via email, phone or video call. We also use Blackboard to provide study advice and further information and resources. Other staff within the School and University are available to provide information and support with non-academic matters, such as IT queries and career development. The library provides access to a wide range of electronic journals, ebooks, databases and other resources, as well as subject guides and assistance from experienced staff.

How is the course assessed?
Assessment is entirely by coursework – there are no formal university exams. Coursework consists of a mixture of assignments such as project reports, practical write-ups, presentations and online discussions, quizzes and tests. We place strong emphasis in coursework on developing and enhancing practical GIS and data analysis abilities, as well as academic and professional skills such as report-writing. The Masters project is written up in the form of a research paper.

How many hours a week does the course take?
In addition to study based on the course materials, students will regularly spend time reading and preparing assignments. As a general guide, a part-time postgraduate student should expect to spend in the

region of 15-20 hours per week on their course during term-time. For full-time students, the weekly commitment is around 35-40 hours.

The semester 1 teaching term runs from late September to mid-December, and semester 2 from late January to the end of April (coursework deadlines may extend a few weeks beyond the teaching terms). No teaching take place during the summer, though full-time students undertake their Masters during this time.

Part-time students who are unable to study at the standard part-time rate can opt for a reduced pace of study, taking one module per semester instead of two.

COURSE REQUIREMENTS

- While the majority of reading material is available free of charge via the University's electronic library resources, you will be expected to buy a small number of textbooks during your course.
- You will need a broadband connection and a well specified PC or laptop running Windows 7 or above (if you use a Mac computer, you will need to install software allowing you to run Windows, e.g. Parallels, although a Windows-based PC will run some of the GIS software more effectively).
- The specialist software required is either licenced through the university or is open-source.

ENTRY QUALIFICATIONS

Applicants are generally expected to have a minimum 2(ii) Honours degree with a substantial component of Geography, Environmental Science or Computing or related disciplines, although candidates with qualifications in other relevant subjects will be considered on an individual basis. Candidates without the standard academic qualifications will also be considered, based on significant relevant work experience; in such cases, previous experience of GIS will be an advantage, and should be explained in detail on the application form.

English language requirements for international applicants

The minimum requirement for this course is Academic IELTS 6.0 with no band score less than 5.5. Trinity ISE: Pass at level III also meets this requirement

FEES

Fees for students from the UK and EU (2021/22 entry) are £6,270 for the Masters; if you only wish to study for the PG Dip, the fees are £4,180 (or £2,090 for the PG Cert).

Fees for International students (2021/22 entry) are £14,910 for the Masters; if you only wish to study for the PG Dip, the fees are £9,940 (or £4,970 for the PG Cert).

Fees can be paid by instalments. Further details of fees, instalment plans and discounts for Ulster alumni can be found at https://www.ulster.ac.uk/study/postgraduate/fees. Some students may be eligible for a government postgraduate loan (these are applicable to distance learning as well as on-campus courses and can be used for full-time or part-time study). Further information is available here and here. Please note that there are currently no grants or scholarships provided

specifically for this course. The University lists various potential sources of scholarships for international students here.

COURSE START DATES

The next course start dates are 20th September 2021 (Semester 1) for both full-time and part-time courses, and 24th January 2022 (Semester 2) for the part-time course. You should apply by the end of August if you wish to start the course in Semester 1, or the end of December for a Semester 2 start. If you want to submit a late application, please contact us first to check availability of places.

APPLYING FOR THE COURSE

You can apply online at www.ulster.ac.uk/study/postgraduate/apply. Please ensure that you include full details of qualifications and work or other relevant experience.

FURTHER INFORMATION

The postgraduate prospectus is available here and you can find our School's other study opportunities here.

If you have any additional queries relating to any aspect of the course, please e-mail the Course Administrator Niamh McInerney (n.mcinerney@ulster.ac.uk) or the Course Director Prof Aidy Moore (a.moore@ulster.ac.uk).