

Geographical Information Management

MSc, PgDip, PgCert

Full and part-time

Geographical information management is an exciting and rapidly growing branch of information technology (IT), incorporating satellite remote sensing, aerial photography, Geographic Information Systems (GIS) and Global Positioning Systems (GPS), to derive information which is essential for the management of the earth's resources at local, national and global scales.

The MSc Geographical Information Management has been developed in collaboration with industry, in response to the increased demand globally for multi-disciplinary managers, advisors and consultants in geographic information. Integration of geospatial technologies is a core theme of the course.

Focus on your career

Successful students develop diverse and rewarding careers in the spatial information industry, national and local government, consultancies, utilities and research organisations, addressing issues such as climate change, flood risk assessment, tropical deforestation, transportation, smart navigation systems, disaster response management, recreation, property management and telecommunications. The international nature of this course means that career opportunities are not restricted to the UK.

"The successful handling of geo-information requires a variety of skills ranging from visual interpretation of features on aerial photography and satellite imagery to statistical analysis, database manipulation and computer programming. The MSc Geographical Information Management provides a thorough grounding in all areas; such a source of graduates is vital if the expanding geographical information industry is to continue supplying end users with the information they need."

Dave Fox, Chief Executive, Infoterra Ltd

Benefit from our links with employers

You will be taught by leading academics and practitioners from industry. The course is directed through its own Industrial Advisory Committee which ensures it is aligned to employer requirements. Members include representatives from Infoterra Ltd, the European Commission Joint Research Centre, and other information specialists. Enthusiastic support for the course comes from leading national and international organisations, including ESRI UK, Centre for Ecology and Hydrology and the Environment Agency.

Benefit from practical experience in work-related group projects

Work-based projects enable you to assimilate the knowledge and skills gained from the taught element of the course and put them into real-world practise while gaining transferable skills in project management, team-work and independent research. Future employers value this experience. Projects have support from industry and other external organisations. Part-time students benefit from addressing their employer's real business problems supported by academic supervision.



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Course details

Duration: Full-time: 1 year.
Part-time: 2-3 years.

Start date: Full-time: October.
Part-time: Throughout the year.

Funding: Funding opportunities exist, such as industrial sponsorship and School bursaries. For the majority of part-time students sponsorship is organised by their employers. For information on funding opportunities please visit: www.cranfield.ac.uk/forms/enquiries.html

Entry requirements: Candidates must possess, or be expected to achieve, a 1st or 2nd class UK honours degree in a relevant environmental, engineering or science-based discipline, or the international equivalent of these UK qualifications. Other relevant qualifications together with industrial experience may be considered.

Who should apply

- Graduates with science, geography, geology, computing, engineering, agriculture or related degrees keen to pursue careers in geographical information management
- Graduates currently working with geographical information, or a related field, keen to extend their qualifications
- Individuals with other qualifications who possess considerable relevant experience

Course overview

The course is an exciting combination of rigorous academic, technical and practical training. The course comprises eight assessed modules, a group project, and an individual research project. The modules include lectures and tutorials, and are assessed through practical work, examinations, assignments and presentations.

The group project is an applied multidisciplinary activity. It provides student teams with the opportunity, whilst working under academic supervision, to gain an intimate knowledge of geographical information technologies and systems, working within agreed objectives, deadlines and budgets.

The project involves the application and integration of the component technologies to produce quality-assured innovative solutions.

The individual research project provides the opportunity to demonstrate independent research ability and overcome genuine problems in relation to the management of the earth's resources. It also offers students the opportunity to work with the types of organisation they will be seeking employment with.

Alternatively, qualifications of Postgraduate Diploma (PgDip), comprising the eight modules and the group project, and Postgraduate Certificate (PgCert), comprising six modules, are available.

Modules

- Advanced GIS Methods
- Aerial Photography and Digital Photogrammetry
- Environmental Resource Survey
- GIS Fundamentals
- Image Processing and Analysis
- Physical Principles of Remote Sensing
- Spatial Data and the Internet
- Spatial Data Management

Structure

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| • Taught modules | 40% |
| • Group project* | 20% |
| • Individual research project | 40% |

*dissertation for part-time students

Why Cranfield University

Cranfield University is a wholly postgraduate university with an international community and a truly global reputation. With a top five ranking for student employment on graduation, an excellent rating for teaching, and exceptional facilities, Cranfield makes an ideal destination for advancing careers. All courses are designed to meet the training needs of industry and have a strong input from experts in their sector. Our focus is on applied research and developing industry's future engineers, managers, consultants and entrepreneurs.

Contact

For further information, please contact
School of Energy, Environment and Agrifood

T: +44 (0) 1234 758008

W: www.cranfield.ac.uk/forms/enquiries.html

