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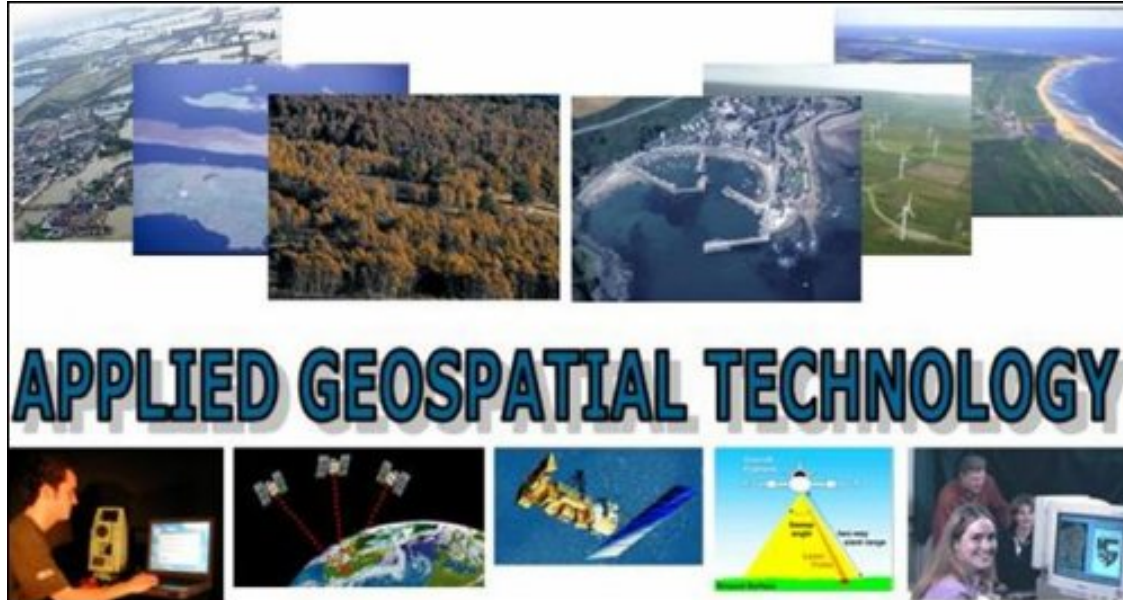
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Applied Geospatial Technology

MSc/PGDip/Cert



What is APPLIED GEOSPATIAL TECHNOLOGY?

In response to a demand for courses, such as Geographical Information Systems (GIS), in which Computing and Information Technology are applied to the processing and analysis of geospatial data, the University of Aberdeen will launch a new postgraduate programme (MSc, Diploma or Certificate) in September 2005.

'Applied Geospatial Technology' covers the fundamentals of techniques for acquiring, processing, classifying, visualising and analysing spatially-referenced data of the Earth, and their application to study of the Earth's surface features. Included are techniques such as land survey, photogrammetry, global positioning systems (GPS), airborne and satellite remote sensing, digital image processing, GIS and Geovisualisation.

Reasons to study Applied Geospatial Technology at Aberdeen University

- Builds on 17 years of postgraduate teaching of remote sensing & GIS
- Promotes the integrated study and application of geospatial technologies
- Develops practical skills in the 'core' techniques in the first half-session
- Covers a wide range of geoscience applications in the second half-session
- Draws on local expertise, of international repute, for example in landscape change, coastal zone management, sub-sea imaging, cartography, alternative energy and hydrocarbon exploration
- Qualification can be obtained at Certificate, Diploma or MSc degree level

Entry Requirements

A degree or equivalent qualification, at the prescribed standard (2nd class honours for MSc) in: Agriculture, Computing Science, Ecology, Engineering, Environmental Science, Forestry, Geography, Geology, Geomatics, Marine Science, Physics, Planning, Plant Science, Soil Science, Zoology or a cognate subject. Candidates with degrees in other subject areas will be considered if they can demonstrate interest, aptitude and experience in a field relevant to the application of geospatial technology.

Duration

12 months full-time or 24 months part-time (MSc); 9 months full-time or 20 months part-time (PgDip);
4 months full-time or 8 months part-time over 2 years (Certificate).

First Half-Session

GG5018 Geospatial Data Acquisition & Image Processing (15 credit points)

GG5035 Introduction to Database Systems (15 credit points)

GG5019 GIS and Geospatial Data Analysis (15 credit points)

GG5020 Geovisualisation for Presentation & Analysis (15 credit points)

Second Half-Session

GG5506 Research Design & Methods (15 credit points)

GG5507 Geospatial Aspects of Current Issues in the Geosciences (10 credit points)

GG5508 Integrated Application of Geospatial Technologies (10 credit points)

GG5509 GIS Project Planning (10 credit points)

Candidates for the Postgraduate Diploma (PgDip) and the MSc degree must complete and pass all of the above 8 taught courses.

In addition, candidates for the PgDip must complete and pass a 'Project in Applied Geospatial Technology' (worth 15 credits) and candidates for the MSc degree must complete and pass, at the required standard, a 'Dissertation in Applied Geospatial Technology' (worth 75 credits).

The Postgraduate Diploma requires a total of 120 credits, the MSc degree a total of 180 credits.

Final Stage

GG5805 Dissertation in Applied Geospatial Technology (75 credit points)
[MSc Candidates]

GG5806 Project in Applied Geospatial Technology (15 credit points)
[Diploma Candidates]

Content

Applied Geospatial Technology (AGT) is concerned with a range of techniques for acquiring, processing, classifying and visualising spatially-referenced data of the Earth's surface and their application to study of the Earth's surface phenomena (particularly in the geosciences). The first half-session (which may be completed for a Certificate qualification) provides the basic techniques, such as : Global Positioning Systems (GPS); Remote Sensing (RS) from air and space; Digital Image Processing systems (DIPs); Database Systems; Geographical Information Systems (GIS) and Geovisualisation (GeoVis). The second half-session then considers how the basic techniques are applied in a range of spatially referenced research issues, especially in the geosciences. Also covered are geospatial 'Research Design and Methods', ' Integrated Use of Geospatial Technologies' and 'How to Plan a GIS Project' relating to a 'real world' problem or issue.

To qualify for the PgDip a candidate must also, with the approval of the programme coordinator, conduct an extended individual study, which can be based on a detailed literature review of a topic, or a report based on a project undertaken as part of a training period (of about one month) within the university or with an approved research institute or industrial partner. Candidates for the

MSc degree must complete the 8 taught modules to a satisfactory standard before being invited to proceed to the dissertation stage, when an individual investigation of an approved research topic is required over the final 3 months (if full-time). The dissertation must be assessed at MSc standard for award of the degree.

Teaching and Assessment

Teaching in the first half-session is by a combination of illustrated lectures, practical demonstrations and student-led seminar discussions on pre-arranged topics. During the second half-session the balance changes towards more student-centred learning making use of internet resources, group practical work, and seminar discussions with experts in a range of application fields. There will also be local site visits to offices which make use of geospatial technologies.

Assessment will be by a combination of: (1) written assignments and laboratory reports as prescribed for each course, (2) summative written examinations covering the four courses in the first half-session, and (3) a dissertation (MSc candidates) or a project report (Diploma candidates). An oral examination may be required. The degree of MSc shall not be awarded to a candidate who fails to complete GG 58XX (the MSc dissertation) at an appropriate standard, irrespective of their performance in other courses.

Careers

A recent sample survey, primarily in Scotland, of potential employers indicated that since 2002 there had been a 30 percent increase in demand for people with geospatial technology skills, and that the demand was likely to grow. Aspects of geospatial technology are of increasing importance in many areas of employment concerned with the landscape, for example in national and local government (where the appearance of 'Geodata Service Units' is increasing), in nature conservation agencies, in hydrocarbon exploration and oilfield management and in environmental consultancy.

How to Apply / Further Information

Online application is possible via the Student Recruitment and Admissions Services (SRAS) webpages on the University of Aberdeen website at : <http://www.abdn.ac.uk/sras/postgraduate/apply.shtml>

Alternatively, the appropriate hardcopy form can be obtained from the Postgraduate Course Secretary or the Programme Coordinator, from whom further information can also be obtained:

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