



## ENGINEERING, COMPUTER SCIENCE AND LAND MANAGEMENT

### *Master Programme in Geomatics 60 cr*

*This postgraduate programme in geomatics is a one-year programme and requires an undergraduate programme in geomatics, or equivalent, as prerequisite for admission.*

The past two decades have witnessed significant advances of geographic information technologies (GIT) involving GPS, remote sensing and geographic information systems (GIS), and increasing booming of their applications in geosciences and social sciences alike. The most tangible showcases of GIT familiar to the Nordic people are Eniro Kartor and hitta.se, with which we can find places or planning a travel going from location A to B. Similar free services are provided by Google Maps and various others. These technologies have another name to refer to, so called geographic information services, i.e. the use of GIT and geographic information for serving the public in their daily lives and businesses.

The potential and prosperity of GIT have been tremendous. As noted by the US department of Labor, cited in Nature January 2004, GIT are "one of the three most important emerging research fields, along with biotechnology and nanotechnology". The launch of Google Earth has further democratised GIT or GIS. Nowadays with a decent Internet connection PC, Google Earth enables ordinary people to play with terabytes of satellite imagery, aerial photos and GIS data, flying from space right down to street level, and easily pinpointing their individual houses. Underlying these technologies is the dynamically evolving discipline Geomatics (GeoInformatics or Geographic Information Science), which is the collective name for individual academic disciplines, for example: photogrammetry, geodesy, land surveying, cartography, GIT, and remote sensing. It should be noted that courses in these

disciplines sometimes are identical with courses in for example geography and spatial planning.

The Geomatics programme consists of one thesis project and six taught courses: two at basic level and four at advanced level. The two courses given at basic level have two purposes. The first is to offer the opportunity for progression, and the students with slightly different knowledge in one of the disciplines in Geomatics are given the possibility to catch up at basic level at the beginning of the programme and afterwards continue at advanced level. The other purpose is to offer students the chance to broaden knowledge in one or other of the subject's disciplines. The four remaining courses at advanced level mainly deal with advanced spatial analysis and research preparation for the thesis project that ends the studies.

Within the field of Geomatics there is the possibility for international exchange. At the moment University of Gävle (HIG) has exchanges in Geomatics with Università degli Studi di Cagliari in Italy, Thompson Rivers University in Canada, Universidad de Extremadura and Universidad Politécnica de Valencia in Spain and Fachhochschule in Mainz and Fachhochschule in München in Germany. Both courses and thesis work are appropriate for study abroad. In the same way the Geomatics programme can accept exchange students from the above colleges. Note however, that participation in exchange may prolong your studies to some extent.

#### **START**

The programme starts in the autumn of 2014.

#### **DEGREE**

Master of Science (60 credits)

#### **PREREQUISITES**

Bachelor of Science (BSc) or Bachelor of Engineering (BEng) degrees in Geomatics or equivalent (e.g. geography or geology including GIS). Also required is knowledge equivalent to Swedish upper secondary school course English B or equivalent to one of the following tests; IELTS: an overall mark of 6.5 and no section below 5.5

TOEFL (paper-based): Score of 4.5 (scale 1-6) in written test and a total score of 575

TOEFL (internet-based): Score of 20 (scale 0-30) in written test and a total score of 90

#### **APPLICATION**

You apply to the programme online at [www.universityadmissions.se](http://www.universityadmissions.se). The application period starts at December 1 and deadline is January 15, 2014. Applications received after this date can only be considered if there are vacancies.

**Application code autumn 2014: HIG-17075**

#### **MORE INFORMATION**

[www.hig.se/english](http://www.hig.se/english) or contact the student counsellor, +46 26 64 89 46 or [studievagledningen@hig.se](mailto:studievagledningen@hig.se)

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