



The Hong Kong Polytechnic University

Department of Land Surveying and Geo-Informatics

MSc/PgDip in Geomatics (Geographic Information Systems) ↓

MSc/PgDip in Geomatics (Surveying) ↓



Programme Aims

This Award in Geomatics aims to provide fundamental knowledge and leading edge skills in GIS and surveying at postgraduate level for those professionals in GIS, surveying or other related fields.

The Multi-disciplinary nature of the award will not only offer experienced professionals advanced knowledge in their area of specialisms, but it will also expand their perspective in the broader field of Geomatics.

This award caters for two groups of students – those coming from non-Geomatics background who are looking for specialist education in GIS and those with Geomatics backgrounds wanting to advance their knowledge. An important feature of the program is that both groups interact and so provide opportunities to integrate different backgrounds thus broadening the experiences of students.

This programme will enhance the knowledge structure for those students with their first degree in Geomatics, surveying or GIS by providing the latest development in Geomatics. On the other hand, for those students with a first degree out of these fields, the programme will enrich their knowledge with GIS or surveying related concepts, principles and technologies.

Programme Characteristics

Our programme is the longest running MSc/PgD program in GIS, and the only MSc/PgD in Geomatics (Surveying) in Hong Kong. The program, after running for more than 10 years, is now highly regarded by GIS and surveying professionals in Hong Kong and this region with graduates being employed in various disciplines.

Our programme focuses on the technological aspect of GIS and so provides a sound foundation in the technical aspect of GIS operation. This allows students to graduate with a useful understanding of how and why GIS can be applied to a wide variety of problems and how the results can be accurately interpreted. On the other hand, our program also involves important issues on application of GIS including logistics, environmental protection and location-based services.

Programme Contents

For the award of Postgraduate Diploma, students shall complete 4 core taught subjects and 3 other taught subjects.

For the award of Master of Science, students shall complete 4 core taught subjects, a dissertation on Geomatics, and 3 other taught subjects.

For those students opting to replace the dissertation with other core subjects, the dissertation-replacement subjects must include Project plus one other core subject from either the GIS or Surveying stream (depending on the stream the student belongs to).

Core Subjects of one specialism also constitute recommended Non-Core Subjects for the other specialism.

Block - 4: Dissertation and Project	4.1 Dissertation	
	4.2 Project	
Block - 3: Applications	3.1 Cadastre and land information management	
	3.2 Applied remote sensing and GIS	
	3.3 Location-based computing and services	
Block - 2: Advanced Technologies	GIS Stream	Surveying Stream
	2.1.1 GIS engineering	2.2.1 Satellite Positioning & Navigation
	2.1.2 Spatial data visualization and modeling	2.2.2 Advanced studies in engineering surveys
	2.3 Spatial data analysis and mining	
	2.4 Remote sensing image processing	
Block - 1: Fundamentals	1.1 Principles of GIS	
	1.2 Spatial data acquisition	

Table 1 Subjects in four levels

Classification of the subjects: core and non-core

For GIS Stream

Core Subjects

- 1.1 Principles of GIS (compulsory)
- 1.2 Spatial data acquisition (compulsory)
- 2.1.1 GIS engineering
- 2.1.2 Spatial data visualization and modeling
- 2.3 Spatial data analysis and mining
- 2.4 Remote sensing image processing
- 4.1 Dissertation
- 4.2 Project

Non-Core Subjects

- 2.2.1 Satellite Positioning & Navigation
- 2.2.2 Advanced studies in engineering surveying
- 3.1 Cadastre and land information management
- 3.2 Applied remote sensing and GIS
- 3.3 Location-based computing and services

For Surveying Stream

Core Subjects

- 1.1 Principles of GIS (compulsory)
- 1.2 Spatial data acquisition (compulsory)
- 2.2.1 Satellite Positioning & Navigation
- 2.2.2 Advanced studies in engineering surveying
- 2.3 Spatial data analysis and mining
- 2.4 Remote sensing image processing
- 4.1 Dissertation
- 4.2 Project

Non-Core Subjects

- 2.1.1 GIS engineering
- 2.1.2 Spatial data visualization and modeling
- 3.1 Cadastre and land information management
- 3.2 Applied remote sensing and GIS
- 3.3 Location-based computing and services



Employment Prospects

The application of GIS in the community of Hong Kong has been increased very rapidly in the past ten years. For instance, many Hong Kong governmental departments have introduced GIS to their daily work, compared with only two to three departments using GIS 10 years ago. These departments include, Lands Department, Planning Department, Highways Department, Transport Department, Fire Services Department, Civil Engineering and Development Department, Agriculture, Fisheries and Conservation Department.

Local industry has also become very interested in GIS. Besides the traditional utility companies like gas and electricity, new industrial areas like telecommunication, planning, public administration, transportation, logistics, car navigation, civil engineering, archaeology and real estate have also started to adopt GIS for their business. GIS has widely extended its application areas from traditional land surveying, mapping to much wider fields of application.

To take advantage of these ever widening opportunities, an MSc/PgD qualification from LSGI is your key to success.

Professional Recognition

The program is recognized by :

- Royal Institution of Chartered Surveyors (RICS)
- Institution of Civil Engineering Surveyors (ICES)

Entrance Requirements

A Bachelor's degree with Honours in engineering, science or technology; OR
A Bachelor's degree with Honours in other relevant disciplines (such as a Bachelor of Arts (Honours) in Geography)[^]; OR
A professional qualification plus relevant work experience related to surveying or GIS[^].

Holders of the qualification marked with [^] above may be invited to attend an interview to assess their suitability for study.

Enquiries

For more information please contact:

Program leader
Prof. SHI Wen-zhong, John

Tel: (852) 2766 5968 or (852) 2766 5975

Fax: (852) 2330 2994

E-mail: lswzshi@polyu.edu.hk

Homepage: <http://www.lsgi.polyu.edu.hk/ugc.asp?id=8>