Contents

[1. Programme Descriptions 1](#_Toc55199110)

[1.1. Geospatial & Mapping Sciences 2](#_Toc55199111)

[1.2. Geoinformation Cartography & Technology 2](#_Toc55199112)

[1.3 Land & Hydrographic Surveying 2](#_Toc55199113)

[1.4 Land & Hydrographic Surveying with Work Placement 2](#_Toc55199114)

[2 Course Descriptions and Reading Lists 3](#_Toc55199115)

[2.1 Geospatial & Mapping Sciences 3](#_Toc55199116)

[2.2 Geoinformation Cartography & Technology 3](#_Toc55199117)

[2.3 Land & Hydrographic Surveying with Work Placement 5](#_Toc55199118)

[2.4 Reading Lists 6](#_Toc55199119)

[2.4.1 Geospatial & Mapping Sciences Reading 6](#_Toc55199120)

[2.4.2 Geoinformation Technology & Cartography Reading 7](#_Toc55199121)

# Programme Descriptions

Both Geospatial & Mapping Sciences (GMS) and Geoinformation Cartography & Technology (GTC) are one year, post graduate taught (PGT) Master level degree programmes at the University of Glasgow.   
  
These MSc degree programmes consist of 180 credits made up of 120 credits of taught courses (each course can be 10 or 20 credits) and a 60-credit dissertation or research project.

Masters level degree qualifications sit at level 11 in the Scottish Credit and Qualification Framework (SCQF).

The post graduate certificates (PGC) is normally 60 credits.

The postgraduate diploma (PGD) is normally 120 credits.

Programmes are available full or part time.

Top level programme descriptions are publicly available online (links are below). Further details are published in ‘Student Handbooks’ and are made available to students on the Virtual Learning Environment (VLE).

## Geospatial & Mapping Sciences

General programme description, structure, career prospects, feeds & funding and entry requirements.

<https://www.gla.ac.uk/postgraduate/taught/geospatialandmappingsciences/>

## Geoinformation Cartography & Technology

General programme description, structure, career prospects, feeds & funding and entry requirements.

<https://www.gla.ac.uk/postgraduate/taught/geoinformationtechnologyandcartography/>

## Land & Hydrographic Surveying

**This programme is the same as Geospatial & Mapping Sciences but with no course options.**  
  
General programme description, structure, career prospects, feeds & funding and entry requirements.

<https://www.gla.ac.uk/postgraduate/taught/landhydrographicsurveying/>

## Land & Hydrographic Surveying with Work Placement

General programme description, structure, career prospects, feeds & funding and entry requirements.

<https://www.gla.ac.uk/postgraduate/taught/landhydrographicsurveyingworkplacement/>

# Course Descriptions and Reading Lists

Descriptions of each course are publicly available online – see links below. These include a description; course aims and ILOs.

Course materials e.g. lecture slides and course work are available on the VLE.

## Geospatial & Mapping Sciences

**Semester 1 – 60 credits**

* [FUNDAMENTALS OF GEOMATICS (COMBINED)](https://www.gla.ac.uk/postgraduate/taught/geospatialandmappingsciences/?card=course&code=GEOG5008) (20 credits)
* [PRINCIPLES AND PRACTICE OF LAND SURVEYING](https://www.gla.ac.uk/postgraduate/taught/geospatialandmappingsciences/?card=course&code=GEOG5017) (20 credits)
* [PRINCIPLES OF GIS](https://www.gla.ac.uk/postgraduate/taught/geospatialandmappingsciences/?card=course&code=GEOG5019) (10 credits)
* [TOPOGRAPHIC MAPPING AND LANDSCAPE MONITORING](https://www.gla.ac.uk/postgraduate/taught/geospatialandmappingsciences/?card=course&code=GEOG5025) (10 credits)

**Semester 2 – 60 credits**

* [APPLIED LAND SURVEYING](https://www.gla.ac.uk/postgraduate/taught/geospatialandmappingsciences/?card=course&code=GEOG5099) (10 credits)
* [ENGINEERING SURVEY](https://www.gla.ac.uk/postgraduate/taught/geospatialandmappingsciences/?card=course&code=GEOG5007) (10 credits)
* [GNSS & GEODESY](https://www.gla.ac.uk/postgraduate/taught/geospatialandmappingsciences/?card=course&code=GEOG5012) (10 credits)
* [HYDROGRAPHIC SURVEY](https://www.gla.ac.uk/postgraduate/taught/geospatialandmappingsciences/?card=course&code=GEOG5014) (10 credits)
* [RESEARCH & PROFESSIONAL ISSUES IN GEOMATICS](https://www.gla.ac.uk/postgraduate/taught/geospatialandmappingsciences/?card=course&code=GEOG5021)(10 credits)

One of:

* [APPLIED HYDROGRAPHIC SURVEYING](https://www.gla.ac.uk/postgraduate/taught/geospatialandmappingsciences/?card=course&code=GEOG5098) (10 credits)
* [GEOSPATIAL DATA INFRASTRUCTURES AND LAND ADMINISTRATION](https://www.gla.ac.uk/postgraduate/taught/geospatialandmappingsciences/?card=course&code=GEOG5013) (10 credits)

**Summer – 60 credits**

* [GEOMATICS MSC PROJECT](https://www.gla.ac.uk/postgraduate/taught/geospatialandmappingsciences/?card=course&code=GEOG5085P) (60 credits)

## Geoinformation Cartography & Technology

**Semester 1 – 60 credits**

* [FUNDAMENTALS OF GEOMATICS (COMBINED)](https://www.gla.ac.uk/postgraduate/taught/geoinformationtechnologyandcartography/?card=course&code=GEOG5008) (20 credits)
* [PRINCIPLES OF CARTOGRAPHIC DESIGN & PRODUCTION](https://www.gla.ac.uk/postgraduate/taught/geoinformationtechnologyandcartography/?card=course&code=GEOG5018) (10 credits)
* [PRINCIPLES OF GIS](https://www.gla.ac.uk/postgraduate/taught/geoinformationtechnologyandcartography/?card=course&code=GEOG5019) (10 credits)
* [PRINCIPLES OF LAND SURVEY](https://www.gla.ac.uk/postgraduate/taught/geoinformationtechnologyandcartography/?card=course&code=GEOG5020) (10 credits)
* [TOPOGRAPHIC MAPPING AND LANDSCAPE MONITORING](https://www.gla.ac.uk/postgraduate/taught/geoinformationtechnologyandcartography/?card=course&code=GEOG5025) (10 credits)

**Semester 2 – 60 credits**

* [APPLIED GIS](https://www.gla.ac.uk/postgraduate/taught/geoinformationtechnologyandcartography/?card=course&code=GEOG5102) (10 credits)
* [GEOSPATIAL DATA INFRASTRUCTURES AND LAND ADMINISTRATION](https://www.gla.ac.uk/postgraduate/taught/geoinformationtechnologyandcartography/?card=course&code=GEOG5013) (10 credits)
* [VISUALISATION & MAP USE](https://www.gla.ac.uk/postgraduate/taught/geoinformationtechnologyandcartography/?card=course&code=GEOG5026) (10 credits)
* [WEB AND MOBILE MAPPING](https://www.gla.ac.uk/postgraduate/taught/geoinformationtechnologyandcartography/?card=course&code=GEOG5015) (10 credits)
* [REMOTE SENSING OF THE ENVIRONMENT](https://www.gla.ac.uk/postgraduate/taught/geoinformationtechnologyandcartography/?card=course&code=GEOG5056) (10 credits)
* [RESEARCH & PROFESSIONAL ISSUES IN GEOMATICS](https://www.gla.ac.uk/postgraduate/taught/geoinformationtechnologyandcartography/?card=course&code=GEOG5021) (10 credits)

**Summer – 60 credits**

* [GEOMATICS MSC PROJECT](https://www.gla.ac.uk/postgraduate/taught/geoinformationtechnologyandcartography/?card=course&code=GEOG5040P) (60 credits)

## Land & Hydrographic Surveying with Work Placement

**Semester 1**

* [FUNDAMENTALS OF GEOMATICS (COMBINED)](https://www.gla.ac.uk/postgraduate/taught/landhydrographicsurveyingworkplacement/?card=course&code=GEOG5008) (20 credits)
* [PRINCIPLES OF GIS](https://www.gla.ac.uk/postgraduate/taught/landhydrographicsurveyingworkplacement/?card=course&code=GEOG5019) (10 credits)
* [PRINCIPLES AND PRACTICE OF LAND SURVEYING](https://www.gla.ac.uk/postgraduate/taught/landhydrographicsurveyingworkplacement/?card=course&code=GEOG5017) (20 credits)
* [TOPOGRAPHIC MAPPING AND LANDSCAPE MONITORING](https://www.gla.ac.uk/postgraduate/taught/landhydrographicsurveyingworkplacement/?card=course&code=GEOG5025) (10 credits)

**Semester 2**

* [APPLIED HYDROGRAPHIC SURVEYING](https://www.gla.ac.uk/postgraduate/taught/landhydrographicsurveyingworkplacement/?card=course&code=GEOG5098) (10 credits)
* [APPLIED LAND SURVEYING](https://www.gla.ac.uk/postgraduate/taught/landhydrographicsurveyingworkplacement/?card=course&code=GEOG5099) (10 credits)
* [ENGINEERING SURVEY](https://www.gla.ac.uk/postgraduate/taught/landhydrographicsurveyingworkplacement/?card=course&code=GEOG5007) (10 credits)
* [GNSS & GEODESY](https://www.gla.ac.uk/postgraduate/taught/landhydrographicsurveyingworkplacement/?card=course&code=GEOG5012) (10 credits)
* [HYDROGRAPHIC SURVEY](https://www.gla.ac.uk/postgraduate/taught/landhydrographicsurveyingworkplacement/?card=course&code=GEOG5014) (10 credits)
* [RESEARCH & PROFESSIONAL ISSUES IN GEOMATICS](https://www.gla.ac.uk/postgraduate/taught/landhydrographicsurveyingworkplacement/?card=course&code=GEOG5021) (10 credits)

**Summer/Autumn**

* [GEOMATICS WORK PLACEMENT](https://www.gla.ac.uk/postgraduate/taught/landhydrographicsurveyingworkplacement/?card=course&code=GEOG5097P) (60 credits)

## Reading Lists

With respect to reading lists there is significant overlap between the GMS and GTC programmes due to shared courses. **The reading lists for LHS and LHSwWP are the same as the GMS programme**. Not all courses on the programmes use the online reading list service so some texts are listed here. Some textbooks are used for more than one course. Lectures usually refer to extra academic articles during the course, these are not always listed in the reading list.

## 2.4.1 Geospatial & Mapping Sciences Reading

**Fundamentals of Geomatics** - <https://rl.talis.com/3/glasgow/lists/41708CA4-D0D1-1802-BE5E-5E225A92F795.html>

**Principles and Practice of Land Surveying** - <https://rl.talis.com/3/glasgow/lists/DB809638-8473-8D74-8D5E-F3CDC616EB7D.html>

**Engineering Survey** - <https://rl.talis.com/3/glasgow/lists/2505C7B1-BF70-E1BD-94EC-B02E7E3C4AA9.html>

**Hydrographic Survey** - <https://rl.talis.com/3/glasgow/lists/539D12F4-9ADA-A7B3-9739-328A69358FA2.html>

**Applied Land Survey** - <https://rl.talis.com/3/glasgow/lists/B3784AB9-E912-6D23-30AF-3CEFBF694A33.html>

**Applied Hydrographic Survey** - <https://rl.talis.com/3/glasgow/lists/C3921E32-BDAC-9344-DB7D-92E02B0E22F1.html>

**Topographic Mapping & Landscape Monitoring** - <https://rl.talis.com/3/glasgow/lists/CDFB3570-757D-4176-D879-4BE7A1121313.html>

**Principles of GIS**

Textbooks

* + Longley et al (2005) Geographic Information Systems and Science.
  + Worboys et al (2004) GIS: A Computing Perspective.

## 2.4.2 Geoinformation Technology & Cartography Reading

**Fundamentals of Geomatics** - <https://rl.talis.com/3/glasgow/lists/41708CA4-D0D1-1802-BE5E-5E225A92F795.html>

**Principles and Practice of Land Surveying** - <https://rl.talis.com/3/glasgow/lists/DB809638-8473-8D74-8D5E-F3CDC616EB7D.html>

**Topographic Mapping & Landscape Monitoring** - <https://rl.talis.com/3/glasgow/lists/CDFB3570-757D-4176-D879-4BE7A1121313.html>

**Principles of GIS**

Textbooks

* + Longley et al (2005) Geographic Information Systems and Science.
  + Worboys et al (2004) GIS: A Computing Perspective.

**Remote Sensing of the Environment**

Textbooks

* Lillesand, T. M., Kiefer, R. W., & Chipman, J. W. (2015). Remote sensing and image interpretation (No. Ed. 6/7).  Wiley
* Barrett, E. C. (2013). Introduction to environmental remote sensing. Routledge.
* Richards, J. A. (2013). Remote sensing digital image analysis: an introduction. Springer.
* Purkis, S. J., & Klemas, V. V. (2011). Remote sensing and global environmental change. Wiley.

Online Tutorials

* Canada Centre for Remote Sensing <http://www.nrcan.gc.ca/node/9309>
* Applied Remote Sensing  Training (ARSET) (NASA) <https://arset.gsfc.nasa.gov/>
* Centre for Remote Imaging, Sensing and Processing (CRISP) at the National University of Singapore <http://www.crisp.nus.edu.sg/~research/tutorial/rsmain.htm>

**Cartography Readings (sample)**

Textbooks

* + Petersen, M.P. (2014) **Mapping in the Cloud.** New York: The Guildford Press.
  + Slocum, T.A., McMaster, R.B., Kessler, F.C., Howard, H.H. (2009) **Thematic Cartography**  
    **and Geographic Visualization** (3rd edition). Upper Saddle River, N.J.: Pearson Prentice Hall
  + Dent, B.D. (1999) **Cartography: Thematic Map Design** (Fifth edition). Boston: WCB McGRaw-Hill.
  + Keates, J.S. (1996) **Understanding Maps.** Harlow: Longman
  + Monmonier,M.S. (1991) **How to Lie with Maps.** Chicago: University of Chicago Press.
  + Mackaness, W.A., Ruas, A., Sarjakoski, L.T. (2007) **Generalisation of Geographic**  
    **Information: Cartogrpahic Modelling and Applications.** Amsterdam: Elsevier for the ICA.