MSc Applied Geoinformatics (Coursework) (02250417)

Minimum duration of study	2 years
Total credits	180
NQF level	09
Contact	Prof SM Coetzee serena.coetzee@up.ac.za +27 (0)124203823

Programme information

A minimum of 180 credits is required to obtain the MSc (Applied Geoinformatics) Coursework degree, made up of coursework (110 credits) and a research component (90 credits).

Other programme-specific information

Candidates are required to familiarise themselves with the General Regulations regarding the maximum period of registration and other requirements for master's degrees.

Promotion to next study year

As long as progress is satisfactory, renewal of the registration of a master's student will be accepted for the second year of the study. Registration for a third and subsequent years will only take place when the Student Administration of the Faculty receives a written motivation that is supported by the head of department and Postgraduate Studies Committee.

Pass with distinction

The MSc degree is conferred with distinction to candidates who obtain a final average mark of at least 75%, with a minimum of 65% in each module, and a mark of at least 75% for the mini-dissertation.

Curriculum: Year 1

Total credits required: 180

First year credits: 110

Elective modules - special note:

Select two of the electives listed in the fixed curriculum OR take modules of a least 30 credits offered as part of ONE of the coursework master's programmes in the Faculty of Natural and Agricultural Sciences, Faculty of Engineering, Built Environment and IT or the Faculty of Economic and Management Sciences. In this instance, the prerequisites of the repective modules selected must be met and permission from the relevant HOD is required.

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Core modules

Introduction to GIS 800 (GIS 800)

Module credits	15.00
Prerequisites	No prerequisites.
Contact time	28 contact hours
Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Semester 1

Module content

Introduction to geographic information systems (GIS), theoretical concepts and applications of GIS.

Advanced GIS 801 (GIS 801)

Module credits	15.00
Prerequisites	GIS 800
Contact time	28 contact hours
Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Semester 2

Module content

Advanced theory and application of geographic information systems (GIS), including spatial analysis, design and implementation of GIS.

Introduction to remote sensing 802 (GIS 802)

Module credits	15.00

Prerequisites	No prerequisites.
Contact time	28 contact hours
Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Semester 1

Module content

Introduction to the scientific principles involved in remote sensing, and its applications for studying the Earth's surface.

Advanced remote sensing 803 (GIS 803)

Module credits	15.00
Prerequisites	GIS 802
Contact time	28 contact hours
Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Semester 2

Module content

Advanced theory and practice in methods and techniques for collecting, processing and analysing remotely sensed data.

Elective modules

Introduction to geospatial programming and databases 804 (GIS 804)

Module credits	15.00
Prerequisites	No prerequisites.
Contact time	28 contact hours
Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Semester 1

Module content

Introduction to programming specifically for applications with geospatial information. Introduction to database management systems with application to geospatial information.

Advanced geospatial programming and databases 805 (GIS 805)

Module credits	15.00
Prerequisites	GIS 804
Contact time	28 contact hours

Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Semester 2

Module content

Programming specifically for applications with geospatial information, including scripting, web services and smartphone app development. Database management systems with application to geospatial information, e.g. object-relational databases, array databases, graph databases and NoSQL databases.

Special topics in geoinformatics 806 (GIS 806)

Module credits	15.00
Prerequisites	No prerequisites.
Contact time	28 contact hours
Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Semester 1 or Semester 2

Module content

A special topic in geoinformatics linked to research specialisation in the department and/or visiting lecturers.

Curriculum: Final year

Total credits: 180

Final year Core credits: 90

Core modules

Mini-dissertation: Applied Geoinformatics 891 (GIS 891)

Module credits	90.00
Prerequisites	Completion of the coursework for the programme.
Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Year

Module content

An approved individual research project carried out under the guidance of a supervisor. Compilation of a research proposal. Literature survey. Selecting an appropriate research method. Carrying out of the research. Analysis and interpretation of the research results. Preparation of a mini-dissertation and a draft journal article.

The information published here is subject to change and may be amended after the publication of this information. The General Regulations (G Regulations) apply to all faculties of the University of Pretoria. It is expected of students to familiarise themselves well with these regulations as well as with the information contained in the General Rules section. Ignorance concerning these regulations and rules will not be accepted as an excuse for any transgression.