

# University of Pretoria Yearbook 2022

## MSc (Applied Geoinformatics) (Coursework) (02250417)

**Department** Statistics

**Minimum duration of study** 2 years

**Total credits** 180

**NQF level** 09

### 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).

### Admission requirements

1. Relevant BScHons (or equivalent) degree
2. A cumulative weighted average of at least 65% for the honours degree
3. An admission examination may be required
4. A CV with contactable references may be required

Note: Additional modules may be required in order to reach the desired standard

### 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.

## 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)

<b>Module credits</b>	15.00
<b>NQF Level</b>	09
<b>Prerequisites</b>	No prerequisites.
<b>Contact time</b>	28 contact hours
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Geography Geoinformatics and Meteorology
<b>Period of presentation</b>	Semester 1

#### Module content

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

### Advanced GIS 801 (GIS 801)

<b>Module credits</b>	15.00
<b>NQF Level</b>	09
<b>Prerequisites</b>	GIS 800
<b>Contact time</b>	28 contact hours
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Geography Geoinformatics and Meteorology
<b>Period of presentation</b>	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)

<b>Module credits</b>	15.00
<b>NQF Level</b>	09
<b>Prerequisites</b>	No prerequisites.
<b>Contact time</b>	28 contact hours
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Geography Geoinformatics and Meteorology
<b>Period of presentation</b>	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)

<b>Module credits</b>	15.00
<b>NQF Level</b>	09
<b>Prerequisites</b>	GIS 802
<b>Contact time</b>	28 contact hours
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Geography Geoinformatics and Meteorology
<b>Period of presentation</b>	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)

<b>Module credits</b>	15.00
<b>NQF Level</b>	09
<b>Prerequisites</b>	No prerequisites.
<b>Contact time</b>	28 contact hours
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Geography Geoinformatics and Meteorology
<b>Period of presentation</b>	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

**NQF Level** 09

**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

**NQF Level** 09

**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

**NQF Level** 09

**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 regulations and rules for the degrees published here are subject to change and may be amended after the publication of this information.

The [General Academic Regulations \(G Regulations\)](#) and [General Student Rules](#) apply to all faculties and registered students of the University, as well as all prospective students who have accepted an offer of a place at the University of Pretoria. On registering for a programme, the student bears the responsibility of ensuring that they familiarise themselves with the General Academic Regulations applicable to their registration, as well as the relevant faculty-specific and programme-specific regulations and information as stipulated in the relevant yearbook. Ignorance concerning these regulations will not be accepted as an excuse for any transgression, or basis for an exception to any of the aforementioned regulations.