

University of Pretoria Yearbook 2025

BSc in Geology 4-year programme (02131006)

Department Geology

Minimum duration of study 4 years

Total credits 508

NQF level 07

Programme information

This is an extended BSc degree programme with a four-year curriculum that is only presented on a full-time basis. It is designed to enable students, who show academic potential, to obtain a BSc degree.

This programme is directed at a general formative education in the natural sciences. It provides the student with a broad academic basis to continue with postgraduate studies and prepares the student for active involvement in a wide variety of career possibilities.

1. Students who are admitted to one of the BSc four-year programmes register for one specific programme.
2. These programmes are followed by students who, as a result of exceptional circumstances, will benefit from an extended programme.
3. Students who do not comply with the normal three-year BSc entrance requirements for study in the Faculty of Natural and Agricultural Sciences, may nevertheless be admitted to the Faculty in one of the BSc four-year programmes. Generally, an extended programme means that the first study year is extended to take two years. The possibility of switching over to other faculties after one or two years in the four-year programmes exists. This depends on selection rules and other conditions stipulated by the other faculties.
4. Applications for admission to the BSc four-year programmes should be submitted in accordance with the UP applications process, with applications considered up to 30 June and in a second round in August/September. Details are obtainable from the Student Administration at the Faculty of Natural and Agricultural Sciences.
5. The rules and regulations applicable to the mainstream study programmes apply mutatis mutandis to the BSc four-year programmes, with exceptions as indicated in the regulations pertaining to the BSc four-year programmes. For instance, students admitted into the BSc four-year programmes must have a National Senior Certificate with admission for degree purposes.

Admission requirements

Important information for all prospective students for 2025

The admission requirements below apply to all who apply for admission to the University of Pretoria with a **National Senior Certificate (NSC) and Independent Examination Board (IEB) qualifications**. [Click here for this Faculty Brochure](#).

Minimum requirements
Achievement level



English Home Language or English First Additional Language	Mathematics	Physical Sciences	APS
NSC/IEB	NSC/IEB	NSC/IEB	
58%	58%	58%	32

Applicants currently in Grade 12 must apply with their final Grade 11 (or equivalent) results.

Applicants who have completed Grade 12 must apply with their final NSC or equivalent qualification results.

Please note that meeting the minimum academic requirements does not guarantee admission.

Only students that have completed school in the last two years and have not studied at a tertiary institution will be considered for this programme.

Successful candidates will be notified once admitted or conditionally admitted.

Unsuccessful candidates will also be notified.

Applicants should check their application status regularly on the UP Student Portal at [click here](#).

Applicants with qualifications other than the abovementioned should refer to the International undergraduate prospectus 2025: Applicants with a school leaving certificate not issued by Umalusi (South Africa), available at [click here](#).

International students: [Click here](#).

Examinations and pass requirements

Academic promotion requirements

Students who do not show progress during the first semester of the first year will be referred to the Admissions Committee of the Faculty.

It is expected of students who register for the first year of the BSc four-year programmes to pass all the prescribed modules of the first year.

Progression requirement

The first year is foundational to the mainstream modules that follow; students will be limited to repeating two foundation modules during year 2 of study. Students may apply for internal transfers at the end of year 2. Not all mainstream programmes will be accessible; the Faculty's transfer guide will clearly outline all possibilities and the overarching objective will be that approved transfers will not involve adding an additional year of study.

Curriculum: Year 1

Minimum credits: 100

Fundamental = 20

Core = 80

Fundamental modules

Academic information management 111 (AIM 111) - Credits: 4.00

Academic information management 121 (AIM 121) - Credits: 4.00

Language, life and study skills 133 (LST 133) - Credits: 6.00

Language, life and study skills 143 (LST 143) - Credits: 6.00

Academic orientation 102 (UPO 102) - Credits: 0.00

Core modules

Foundational biology 137 (BIO 137) - Credits: 8.00

Foundational biology 147 (BIO 147) - Credits: 8.00

Foundational chemistry 137 (CMY 137) - Credits: 8.00

Foundational chemistry 147 (CMY 147) - Credits: 8.00

Foundational physics 137 (PHY 137) - Credits: 8.00

Foundational physics 147 (PHY 147) - Credits: 8.00

Foundational statistics 137 (STC 137) - Credits: 8.00

Foundational statistics 147 (STC 147) - Credits: 8.00

Foundational mathematics 137 (WTW 137) - Credits: 8.00

Foundational mathematics 147 (WTW 147) - Credits: 8.00



Curriculum: Year 2

Minimum credits: 130

Core = 130

Core modules

Biometry 120 (BME 120) - Credits: 16.00
General chemistry 117 (CMY 117) - Credits: 16.00
General chemistry 127 (CMY 127) - Credits: 16.00
Southern African geomorphology 166 (GGY 166) - Credits: 8.00
Introduction to geology 155 (GLY 155) - Credits: 16.00
Earth history 163 (GLY 163) - Credits: 16.00
Cartography 110 (GMC 110) - Credits: 10.00
First course in physics 114 (PHY 114) - Credits: 16.00
Mathematics 134 (WTW 134) - Credits: 16.00



Curriculum: Year 3

Minimum credits: 134

Core = 94
Elective = 40

Additional information:

Students must select at least 40 credits of electives, bearing the following in mind:

- To be eligible for Chemistry or Hydrogeology Honours, CMY 282, CMY 283, CMY 284, CMY 285 (48 credits) are required (48 credits)
- To be eligible to take GIS 320, GIS 220 is required

Core modules

[Introductory geographic information systems 283](#) (GGY 283) - Credits: 14.00

[Introductory soil science 250](#) (GKD 250) - Credits: 12.00

[Sedimentology 253](#) (GLY 253) - Credits: 24.00

[Igneous and metamorphic petrology 263](#) (GLY 263) - Credits: 24.00

[Geological field mapping 266](#) (GLY 266) - Credits: 6.00

[Remote sensing 220](#) (GMA 220) - Credits: 14.00

Elective modules

[Biometry 210](#) (BME 210) - Credits: 24.00

[Physical chemistry 282](#) (CMY 282) - Credits: 12.00

[Analytical chemistry 283](#) (CMY 283) - Credits: 12.00

[Organic chemistry 284](#) (CMY 284) - Credits: 12.00

[Inorganic chemistry 285](#) (CMY 285) - Credits: 12.00

[Process geomorphology 252](#) (GGY 252) - Credits: 12.00

[Geographic data analysis 220](#) (GIS 220) - Credits: 14.00

[Surveying 220](#) (SUR 220) - Credits: 14.00

Curriculum: Final year

Minimum credits: 144

Core = 78

Elective = minimum 66 credits

Additional information:

Students must select 72 credits of electives, bearing in mind the following:

- CMY 382, CMY 383, CMY 384, CMY 385 (72 credits) are required to be eligible for Chemistry Honours
- GKD 320, GKD 350 and PGW 350 (42 credits) are required to be eligible for Soil Science Honours
- CMY 385, CMY 383, and GLY 369 (72 credits) are required to be eligible for Hydrogeology Honours
- GGY 363 and GIS 310 or GMA 320 are required to be eligible for Geography and Environmental Science Honours

Core modules

[Economic geology 367](#) (GLY 367) - Credits: 36.00

[Advanced Geological field mapping 368](#) (GLY 368) - Credits: 6.00

[Structural geology and hydrogeology 370](#) (GLY 370) - Credits: 36.00

Elective modules

[Physical chemistry 382](#) (CMY 382) - Credits: 18.00

[Analytical chemistry 383](#) (CMY 383) - Credits: 18.00

[Organic chemistry 384](#) (CMY 384) - Credits: 18.00

[Inorganic chemistry 385](#) (CMY 385) - Credits: 18.00

[Applied geomorphology 363](#) (GGY 363) - Credits: 12.00

[Geographic information systems 310](#) (GIS 310) - Credits: 22.00

[Spatial analysis 320](#) (GIS 320) - Credits: 22.00

[Soil chemistry 320](#) (GKD 320) - Credits: 14.00

[Soil formation and classification 350](#) (GKD 350) - Credits: 14.00

[Engineering geology and rock mechanics 369](#) (GLY 369) - Credits: 36.00

[Remote sensing 320](#) (GMA 320) - Credits: 22.00

[Soil-water relationship and irrigation 350](#) (PGW 350) - Credits: 14.00

General Academic Regulations and Student Rules

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. The G Regulations are updated annually and may be amended after the publication of this information.

Regulations, degree requirements and information

The faculty regulations, information on and requirements for the degrees published here are subject to change and may be amended after the publication of this information.

University of Pretoria Programme Qualification Mix (PQM) verification project

The higher education sector has undergone an extensive alignment to the Higher Education Qualification Sub-Framework (HEQSF) across all institutions in South Africa. In order to comply with the HEQSF, all institutions are legally required to participate in a national initiative led by regulatory bodies such as the Department of Higher Education and Training (DHET), the Council on Higher Education (CHE), and the South African Qualifications Authority (SAQA). The University of Pretoria is presently engaged in an ongoing effort to align its qualifications and programmes with the HEQSF criteria. Current and prospective students should take note that changes to UP qualification and programme names, may occur as a result of the HEQSF initiative. Students are advised to contact their faculties if they have any questions.