Universiteit van Pretoria Jaarboek 2018

BScHons Ingenieurs- en Omgewingsgeologie Hidrogeologie (02240376)

Minimum duur van studie	1 jaar
Totale krediete	135

Programinligting

Hierdie inligting is slegs in Engels beskikbaar.

Renewal of registration

1. Subject to exceptions approved by the Dean, on the recommendation of the head of department, and in the case of distance education where the Dean formulates the stipulations that will apply, a student may not sit for an examination for the honours degree more than twice in the same module.
2. A student for an honours degree must complete his or her study, in the case of full-time students, within two years and, in the case of after-hours students, within three years of first registering for the degree and, in the case of distance education students, within the period stipulated by the Dean. Under special circumstances, the Dean, on the recommendation of the head of department, may give approval for a limited extension of this period.

In calculating marks, General Regulation G.12.2 applies.

Apart from the prescribed coursework, a research project is an integral part of the study.

Toelatingsvereistes

'n BSc-graad in Geologie of Omgewings- en Ingenieursgeologie met 'n gemiddeld van 60% vir al die modules, Toegepaste Geologie op tweedejaars- en derdejaarsvlak. Hierdie modules moet grondmeganika, rots meganika, ingenieursgeologie en hidrogeologie insluit. In die keuringsprosedure sal die kandidaat _se volledige voorgraadse akademiese rekord oorweeg word. Die beskikbare posisies is beperk tot 15 en kandidate wat deur middel van hul voorgraadse graad vinniger gevorder het, sal voorkeur kry. Buite aansoekers en diegene met 'n ongewone graad strukture kan na insae van hul akademiese rekords en deur die diskresie van die departementshoof toegelaat word.

Slaag met lof

The BScHons degree is awarded with distinction to a candidate who obtains a weighted average of at least 75% in all the prescribed modules and a minimum of 65% in any one module.

Kurrikulum: Finale jaar

Minimum krediete: 135

Kernmodules

Terreinevalueringprojek 713 (GTX 713)

Modulekrediete	30.00
Voorvereistes	GLY 363/GLY 364 of TDH
Kontaktyd	13 praktiese sessies per week vir 11 weke, 1 lesing per week vir 11 weke
Onderrigtaal	Module word in Engels aangebied
Departement	Geologie
Aanbiedingstydperk	Jaar

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

Field work which includes mapping, soil and rock description, joint surveys, borehole testing, water sampling, interpretation of laboratory test results and compilation of site investigation reports. Larger projects of at least two months of fieldwork and report writing which involves surface and underground studies, mapping, drill core logging, discontinuity surveys, rock mass classification, stability analyses, interpretation of laboratory tests or pollution studies including water and/or soil sampling, interpretation of laboratory tests, development of a rehabilitation plan or groundwater model and compilation of a report. Compulsory attendance at conferences, short courses, specialist lectures, visits to construction sites and fields excursions.

Ingenieursgeologie van Suid-Afrika 714 (GTX 714)

Modulekrediete	15.00
Voorvereistes	SGM 311 of TDH
Kontaktyd	2 praktiese sessies per week, 2 lesings per week
Onderrigtaal	Module word in Engels aangebied
Departement	Geologie
Aanbiedingstydperk	Jaar

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

Overview of site investigation phases; site investigation techniques; soil profiling and rock core description. Literature study and compilation of reports on the stratigraphy of South African rock types and engineering problems of rocks and soils within different stratigraphic units and climatic regions.

Omgewingsgeochemie 715 (GTX 715)

Modulekrediete	15.00
Voorvereistes	Geen voorvereistes.

Kontaktyd	2 lesings per week, 2 praktiese sessies per week
Onderrigtaal	Module word in Engels aangebied
Departement	Geologie
Aanbiedingstydperk	Jaar

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

Principles of low temperature geochemistry; geochemistry and origin of acid mine water; acid-mineral reactions; industrial effluents, remediation methods, waste disposal, environmental sampling and data analysis; geochemical modelling.

Omgewingsbestuur 716 (GTX 716)

Modulekrediete	15.00
Voorvereistes	Geen voorvereistes.
Kontaktyd	2 praktiese sessies per week, 2 lesings per week
Onderrigtaal	Module word in Engels aangebied
Departement	Geologie
Aanbiedingstydperk	Jaar

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

Principles of integrated environmental management; environmental impact assessment; environmental management systems (ISO 14000 series); water resource management; environmental legislation; site investigation guidelines; natural hazard risk assessment; seismicity; project management and professional business practice.Geological models and software.

Hidrogeologiese modellering 718 (GTX 718)

Modulekrediete	15.00
Voorvereistes	GTX 725
Kontaktyd	2 lesings per week, 2 praktiese sessies per week
Onderrigtaal	Module word in Engels aangebied
Departement	Geologie
Aanbiedingstydperk	Jaar

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

Finite-difference methods; numerical solution of the flow and transport equations; spatial and temporal discretisation, stability criteria; development of conceptual models; introduction to PMWIN/Modflow.

Besoedelingsvervoer 719 (GTX 719)

Modulekrediete	15.00
Voorvereistes	GTX 715 of TDH
Kontaktyd	2 praktiese sessies per week, 2 lesings per week
Onderrigtaal	Module word in Engels aangebied
Departement	Geologie
Aanbiedingstydperk	Jaar

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

Theory of contaminant transport in porous and fractured aquifiers, determination of transport parameters, boundary conditions, analytical solutions of 1-, 2- and 3-dimensional transport equations for porous aquifiers, analytical solutions for fractured aquifiers.

Fluid mechanics in geological media 725 (GTX 725)

Modulekrediete	15.00
Voorvereistes	GLY 363 and GLY 265
Kontaktyd	2 praktiese sessies per week vir 3 weke, 2 lesings per week vir 3 weke
Onderrigtaal	Module word in Engels aangebied
Departement	Geologie
Aanbiedingstydperk	Jaar

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

Statics and dynamics of fluids, including water, aqueous phase liquids (saline water), non-aqueous phase liquids (petroleum hydrocarbons), gases (atmospheric air) and man-made fluids (gout) through natural and man-made porous media (eg soil, rock, concrete). Single phase flow and multiphase flow; saturated and unsaturated flow. Quantification of hydrological parameters. South African hydrostratigraphy. Drainage and dewatering.

Keusemodules

Rotsingenieurswese 722 (GTX 722)

Modulekrediete	15.00
Voorvereistes	GLY 364 of TDH
Kontaktyd	2 lesings per week vir 3 weke, 2 praktiese sessies per week vir 3 weke
Onderrigtaal	Module word in Engels aangebied
Departement	Geologie
Aanbiedingstydperk	Jaar

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

Mapping, description (core logging and discontinuity surveys) and classification of rock masses; engineering properties of rock masses including deformability, shear strength of discontinuities, in situ strength and permeability of rock masses; effects, theoretical derivation and practical measurements of in situ stresses.

Rots- en grondverbetering 726 (GTX 726)

Modulekrediete	15.00
Voorvereistes	GLY 264 of TDH
Kontaktyd	2 lesings per week vir 3 weke, 2 praktiese sessies per week vir 3 weke
Onderrigtaal	Module word in Engels aangebied
Departement	Geologie
Aanbiedingstydperk	Jaar

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

Grouting materials and procedures; rock and soil support and stabilisation; rock and soil compaction; geofabrics; water seepage and drainage methods.

Die inligting wat hier verskyn, is onderhewig aan verandering en kan na die publikasie van hierdie inligting gewysig word.. Die Algemene Regulasies (G Regulasies) is op alle fakulteite van die Universiteit van Pretoria van toepassing. Dit word vereis dat elke student volkome vertroud met hierdie regulasies sowel as met die inligting vervat in die Algemene Reëls sal wees. Onkunde betrefffende hierdie regulasies en reels sal nie as ‘n verskoning by oortreding daarvan aangebied kan word nie.