

POSTGRADUATE DIPLOMA IN GEOLOGY

Qualification code: PDGE21 - NQF Level 8 (120 credits)

SAQA ID: 111177, CHE NUMBER: H/H16/E097CAN

Campus where offered: Arcadia Campus

REMARKS

- a. *Admission requirement(s):*
An Advanced Diploma in Geology, **or** a Baccalaureus Technologiae: Geology, **or** a bachelor's degree in Geology, **or** an equivalent qualification at NQF level 7 with 120 credits. Preference will be given to applicants with an average of 60% or more in the previous qualification.
- Holders of any other equivalent South African or international qualification may also be considered, see Chapter 1 of Students' Rules and Regulations.
- b. *Selection criteria:*
Selection is based on an assessment by a departmental selection panel. Candidates will be evaluated based on the performance in the previous qualification obtained and/or work experience.
- Acceptance is subject to available capacity according to the Student Enrolment Plan (SEP). Applicants will be informed of their status per official letter from the Office of the Registrar, alternatively, they can check their application status on the TUT website, www.tut.ac.za.
- c. *Recognition of Prior Learning (RPL), equivalence and status:*
See Chapter 30 of Students' Rules and Regulations.
- d. *Intake for the qualification:*
January only.
- e. *Presentation:*
Day classes.
- f. *Minimum duration:*
One year.
- g. *Exclusion and readmission:*
See Chapter 2 of Students' Rules and Regulations.

CURRICULUM

YEAR MODULES

CODE	MODULE	NQF-L	CREDIT
ENG108G	Engineering Geology V	(8)	(20)
GEP108G	Geophysics V	(8)	(20)
HYG108G	Hydrogeology V	(8)	(20)
MEG108G	Mining and Exploration Geology V	(8)	(20)
RPG108G	Research Project	(8)	(40)
RPG118R	Research Project (re-registration) (semester module)	(8)	(0)

TOTAL CREDITS FOR THE QUALIFICATION: **120**

MODULE INFORMATION (OVERVIEW OF SYLLABUS)

The syllabus content is subject to change to accommodate industry changes. Please note that a more detailed syllabus is available at the Department or in the study guide that is applicable to a particular module. At time of publication, the syllabus content was defined as follows:

E

ENGINEERING GEOLOGY V (ENG108G)

1 X 3-HOUR PAPER

(Module custodian: Department of Environmental, Water and Earth Sciences)

Determination of rock strength. Shear stress and effective stress in soils. Determination of a position for drilling. Engineering geology core logging (Total tuition time: ± 200 hours)

G

GEOPHYSICS V (GEP108G)

1 X 3-HOUR PAPER

(Module custodian: Department of Environmental, Water and Earth Sciences)

Design of detailed geophysical surveys. Data processing using complex algorithms and software to produce maps. Radiometrics. Borehole loggers. (Total tuition time: ± 200 hours)

H

HYDROGEOLOGY V (HYG108G)

1 X 3-HOUR PAPER

(Module custodian: Department of Environmental, Water and Earth Sciences)

Hydrochemistry. Groundwater conceptual modelling. Numerical groundwater flow modelling and mass transport modelling. Environmental isotopes as tracers for groundwater. Groundwater legislation. Interpretation of groundwater modelling results. (Total tuition time: ± 200 hours)

M

MINING AND EXPLORATION GEOLOGY V (MEG108G)

1 X 3-HOUR PAPER

(Module custodian: Department of Environmental, Water and Earth Sciences)

Ore reserves estimations. Ore body modelling techniques. Mine feasibility studies and mineral economics. Ore reserves and grade calculations. Assessment of the mining financial indicators. SAMREC code. Coal resources and coal reserves classification. Mine and grade tonnage curves. Mine break-even point. Mine Call Factor (Total tuition time: ± 200 hours)

R

RESEARCH PROJECT (RPG108G, RPG118R)

PROJECT ASSESSMENT

(Module custodian: Department of Environmental, Water and Earth Sciences)

Identification of a geological problem. Literature review. Set out objectives and an experimental design. Write a research project proposal. Fieldwork and experimental work. Data Collection; Data Analysis; Interpretation; Discussion and Conclusions. Submitting a thesis. (Total tuition time: ± 400 hours)

