

# University of Pretoria Yearbook 2022

## BEngHons *Mining Engineering* (12240072)

**Department** Mining Engineering

**Minimum duration of study** 1 year

**Total credits** 128

**NQF level** 08

### Programme information

Refer also to G16-G29.

The curriculum is determined in consultation with the relevant heads of departments. A student is required to pass modules to the value of at least 128 credits.

The degree is awarded on the basis of examinations only.

### Admission requirements

1. BEng (Mining) degree awarded by the University of Pretoria **or** relevant four-year bachelor's degree in engineering that the Engineering Council of South Africa (ECSA) regards as acceptable for registration as a candidate engineer and for eventual registration as a professional engineer
2. A weighted average of at least 60%
3. At least 2 years mining work experience
4. An entrance examination may be required
5. Comprehensive intellectual CV

### Other programme-specific information

A limited number of appropriate modules from other departments are allowed, i.e. 64 credits.

### Examinations and pass requirements

Refer also to G18 and G26.

- i. The examination in each module for which a student is registered, takes place during the normal examination period after the conclusion of lectures (i.e. October/November or May/June).
- ii. G18(1) applies with the understanding that under exceptional circumstances an extension of a maximum of three years may be approved: provided that the Dean, on recommendation of the relevant head of department, may approve a stipulated limited extension of this period.
- iii. A student must obtain at least 50% in an examination for each module where no semester or year mark is required. A module may only be repeated once.
- iv. In modules where semester or year marks are awarded, a minimum examination mark of 40% and a final

mark of 50% is required.

v. No supplementary or special examinations are granted at postgraduate level.

## Pass with distinction

A student passes with distinction if he or she obtains a weighted average of at least 75% (not rounded) in the first 128 credits for which he or she has registered (excluding modules which were discontinued timeously). The degree is not awarded with distinction if a student fails any one module (excluding modules which were discontinued timeously). The degree must be completed within the prescribed study period.



## Curriculum: Final year

**Minimum credits: 128**

PSS 700 compulsory module / verpligte module

### Core modules

#### Financial mine valuation 780 (PFZ 780)

|                               |                                |
|-------------------------------|--------------------------------|
| <b>Module credits</b>         | 16.00                          |
| <b>NQF Level</b>              | 08                             |
| <b>Prerequisites</b>          | No prerequisites.              |
| <b>Contact time</b>           | Self study                     |
| <b>Language of tuition</b>    | Module is presented in English |
| <b>Department</b>             | Mining Engineering             |
| <b>Period of presentation</b> | Semester 1 or Semester 2       |

#### Airflow and fans 711 (PKB 711)

|                               |                                |
|-------------------------------|--------------------------------|
| <b>Module credits</b>         | 16.00                          |
| <b>NQF Level</b>              | 08                             |
| <b>Prerequisites</b>          | No prerequisites.              |
| <b>Contact time</b>           | Self study                     |
| <b>Language of tuition</b>    | Module is presented in English |
| <b>Department</b>             | Mining Engineering             |
| <b>Period of presentation</b> | Semester 1 or Semester 2       |

#### Heat and refrigeration 712 (PKB 712)

|                               |                                |
|-------------------------------|--------------------------------|
| <b>Module credits</b>         | 16.00                          |
| <b>NQF Level</b>              | 08                             |
| <b>Prerequisites</b>          | No prerequisites.              |
| <b>Contact time</b>           | Self study                     |
| <b>Language of tuition</b>    | Module is presented in English |
| <b>Department</b>             | Mining Engineering             |
| <b>Period of presentation</b> | Semester 1 or Semester 2       |

#### Advanced design: Mining 780 (PMZ 780)

|                       |       |
|-----------------------|-------|
| <b>Module credits</b> | 16.00 |
| <b>NQF Level</b>      | 08    |



|                               |                                |
|-------------------------------|--------------------------------|
| <b>Prerequisites</b>          | No prerequisites.              |
| <b>Contact time</b>           | Self study                     |
| <b>Language of tuition</b>    | Module is presented in English |
| <b>Department</b>             | Mining Engineering             |
| <b>Period of presentation</b> | Semester 1 or Semester 2       |

### Open-pit mining 783 (POY 783)

|                               |                                |
|-------------------------------|--------------------------------|
| <b>Module credits</b>         | 16.00                          |
| <b>NQF Level</b>              | 08                             |
| <b>Prerequisites</b>          | No prerequisites.              |
| <b>Contact time</b>           | Self study                     |
| <b>Language of tuition</b>    | Module is presented in English |
| <b>Department</b>             | Mining Engineering             |
| <b>Period of presentation</b> | Semester 1 or Semester 2       |

### Advanced explosive engineering 785 (PRX 785)

|                               |                                |
|-------------------------------|--------------------------------|
| <b>Module credits</b>         | 16.00                          |
| <b>NQF Level</b>              | 08                             |
| <b>Prerequisites</b>          | No prerequisites.              |
| <b>Language of tuition</b>    | Module is presented in English |
| <b>Department</b>             | Mining Engineering             |
| <b>Period of presentation</b> | Semester 1 or Semester 2       |

#### Module content

Types of commercial explosives. Properties of explosives. Explosive initiating systems, application of explosives in rock breaking; Surface and underground blast designs and specialised blast designs; the effects of geology on blast results. Fragmentation, blasting and environmental control. Blast assessment. Ethics and regulatory compliance. Safety in blasting.

### Research project 700 (PSS 700)

|                               |                                |
|-------------------------------|--------------------------------|
| <b>Module credits</b>         | 32.00                          |
| <b>NQF Level</b>              | 08                             |
| <b>Prerequisites</b>          | No prerequisites.              |
| <b>Contact time</b>           | Self study                     |
| <b>Language of tuition</b>    | Module is presented in English |
| <b>Department</b>             | Mining Engineering             |
| <b>Period of presentation</b> | Year                           |

---

## Module content

\*This is a compulsory research module.

### Strata control: Hard-rock mining 786 (PSZ 786)

|                               |                                |
|-------------------------------|--------------------------------|
| <b>Module credits</b>         | 16.00                          |
| <b>NQF Level</b>              | 08                             |
| <b>Prerequisites</b>          | No prerequisites.              |
| <b>Contact time</b>           | Self study                     |
| <b>Language of tuition</b>    | Module is presented in English |
| <b>Department</b>             | Mining Engineering             |
| <b>Period of presentation</b> | Semester 1 or Semester 2       |

---

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.