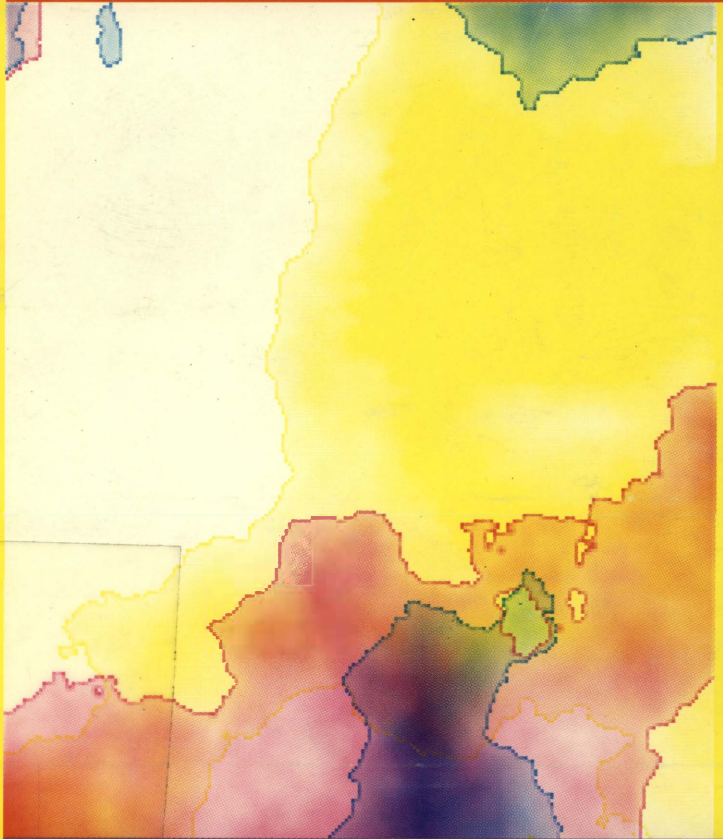


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*Study Opportunities
at Universities
& Technikons*



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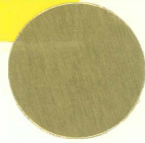


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**STUDY OPPORTUNITIES AT
UNIVERSITIES AND TECHNİKONS:
*ENGINEERING***

**STUDIEGELEENTHEDE AAN
UNIVERSITEITE EN TECHNİKONS:
*INGENIEURSWESE***

1995

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*INGENIEURSWESE***

1995

J. Roodt
M.W. Craemer
A.E. Verster



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CONTENTS/INHOUDSOPGAWE

HOW TO USE THIS GUIDE/ HOE OM HIERDIE GIDS TE GEBRUIK	iv
--	----

STUDY OPPORTUNITIES AT UNIVERSITIES AND TECHNIKONS

Index of fields of study for which the study opportunities are available	1
Study opportunities at universities	2
Study opportunities at technikons	6
Index of occupations	30

STUDIEGELEENTHEDE AAN UNIVERSITEITE EN TECHNIKONS

Indeks van studierigtings waarvoor studiegeleentehede beskikbaar is	31
Studiegeleentehede aan universiteite	32
Studiegeleentehede aan technikons	36
Indeks van beroepe	58

APPENDIX/BYLAE:

Addresses of institutions mentioned in this guide/
Adresse van instellings genoem in hierdie gids

Universities/Universiteite	59
Technikons	61

HOW TO USE THIS GUIDE

- The following suggestion will help you find information on the study opportunities:

- Use the Index of fields of study or the Index of occupations to trace the appropriate degree, diploma or certificate.

- Apply for enrolment in good time. The application form has to be obtained, completed and submitted before a closing date. Enrolment dates are determined annually.

- Course fees are subject to change.

- In this guide

correspondence means that the degree, diploma or certificate can be obtained by means of correspondence. If the word correspondence does not appear in the entry, it means that classes have to be attended.

Afrikaans medium or English medium means the language in which the course is presented.

HOE OM DIE GIDS TE GEBRUIK

- Om die naslaan van die inskrywings te vergemaklik, word die volgende wenke gegee:

- Gebruik die Studierigtingindeks of die Indeks van beroepe om die toepaslike graad, diploma of sertifikaat op te soek.

- Doen betyds aansoek om toelating. Gewoonlik moet 'n aansoekvorm aangevra, ingevul en ingestuur word voor 'n sluitingsdatum. Sluitingsdatums wissel jaarliks.

- Kursusgelde is onderhewig aan verandering.

- In hierdie gids beteken

korrespondensie dat die graad, diploma of sertifikaat deur middel van korrespondensie behaal kan word. Indien die woord korrespondensie nie by die inskrywing voorkom nie, word die kursus deur middel van klasbywoning aangebied.

Afrikaans- of Engelsmedium die taalmedium waarin die kursusse aangebied word.

occupations means the possible occupations that can be followed by persons who have obtained the qualification. Only a few occupations are mentioned but in certain cases more occupations can usually be followed. (Occupations with the same work content are also known under different names to various employers.)

admission qualification means the minimum educational qualifications that is needed to enrol for a degree, diploma or certificate. Equivalent qualifications e.g. N3, may also be accepted and institutions sometimes permit candidates to enrol without the prescribed qualifications. An approved African language or German may, under certain circumstances, replace one of the official languages. Write to the institutions for more information.

Although the information in this publication has been compiled carefully, changes may have been made in the meantime. Applicants, when applying, should therefore make sure that the course is still available.

The institutions also offer continuing education programmes or short courses. Students are advised to make enquiries at the institution concerned.

Particular appreciation is expressed to the institutions which made information available and co-operated in updating the information.

beroepe die moontlike beroepe wat met die kwalifikasie beoefen kan word. Enkele beroepsname word genoem, maar in sommige gevalle kan veel meer beroepe beoefen word. (Beroepe met dieselfde werkinhoud is ook onder verskillende name by die werkgewers bekend.)

toetreekwalifikasie die minimum opvoedkundige kwalifikasie wat vereis word om vir die graad, diploma of sertifikaat in te skryf. Gelykwaardige kwalifikasies byvoorbeeld N3, word ook aanvaar en soms laat die instellings persone toe om sonder die voorgeskrewe kwalifikasie in te skryf. 'n Goedgekeurde Afrikaans of Duits mag, op sekere voorwaardes, een van die amptelike tale vervang. Skryf aan die instellings vir verdere besonderhede.

Alhoewel die inligting in hierdie gids met sorg saamgestel is, kon veranderinge intussen plaasgevind het. Aansoekers moet dus tydens aansoek seker maak dat die kursus wel aangebied word.

Die instellings bied ook bykomend voortgesette opleidingsprogramme of kort kursusse aan. Doen navraag by die betrokke instellings.

Hartlike dank aan die instellings wat inligting beskikbaar gestel het en meegewerk het met die opdatering van die inligting.

**STUDY OPPORTUNITIES
AT UNIVERSITIES AND TECHNIKONS**

INDEX OF FIELDS OF STUDY FOR WHICH STUDY OPPORTUNITIES ARE AVAILABLE

PAGE

UNIVERSITIES

ENGINEERING	2
LAND SURVEYING	4
METEOROLOGY	4
TOWN AND REGIONAL PLANNING	4

TECHNIKONS

CARTOGRAPHY	6
CHEMICAL ENGINEERING	6
CIVIL ENGINEERING	8
CIVIL ENGINEERING: AGRICULTURE	10
COAL MINING	11
COMPUTER SYSTEMS	12
COMPUTER SYSTEMS (ENGINEERING)	13
DRILLING PRACTICE	13
ECONOMIC GEOLOGY	13
ELECTRICAL ENGINEERING	13
EXTRACTION METALLURGY	17
INDUSTRIAL ENGINEERING	17
MARITIME STUDIES	19
MECHANICAL ENGINEERING	19
METALLIFEROUS MINING	22
METALLURGICAL ENGINEERING	22
METEOROLOGY	23
MINE SURVEYING	24
NON-DESTRUCTIVE TESTING	24
SURFACE MINING	25
SURVEYING	26
TELECOMS	27
TOWN AND REGIONAL PLANNING	28
WOOD PRODUCTION ENGINEERING	28
NON-DIRECTED PROGRAMMES	25
BRIDGING COURSES	6

**STUDY OPPORTUNITIES
AT UNIVERSITIES**

ENGINEERING

Occupation(s): Aeronautical engineer; Agricultural engineer; Chemical engineer; Civil engineer; Electrical engineer; Electronics engineer; Industrial engineer; Materials engineer; Mechanical engineer; Metallurgical engineer; Mining engineer;

Venue: University of Stellenbosch
Afrikaans medium

B.Eng.

Fields: Industrial Engineering; Chemical Engineering; Electrical and Electronic Engineering; Mechanical Engineering; Civil Engineering

Duration: 4 years

Entry qualification: Senior Certificate with university admission (D symbol average)

Subjects required: Mathematics HG (D symbol) and Physical Science HG (E symbol) or SG (C symbol). Afrikaans HG and English

Subjects recommended: A modern European Language or an African Language

Selection: Scholastic achievement; academic ability; aptitude and interest; qualities of leadership and participation in extra-mural activities

Fees: R5800 p.a.

Venue: Rand Afrikaans University
Afrikaans medium

B.Eng.

Fields: Electrical and Electronic Engineering; Mechanical Engineering; Civil Engineering

Duration: 4 years (approved practical work is required)

Entry qualification: Senior Certificate with university admission

Subjects required: Candidates should comply with certain minimum requirements (M-counting). Afrikaans First Language HG (D symbol) or Second Language HG (C symbol) or Afrikaans as Third Language SG (C symbol)

Selection: Diagnostic tests and academic achievement

Fees: Approximately R5000 - R6000 p.a.

Venue: University of the Witwatersrand
English medium

B.Sc. (Eng.)

Fields: Aeronautical Engineering; Chemical Engineering; Civil Engineering; Metallurgy and Materials Engineering; Electrical Engineering; Industrial Engineering; Mechanical Engineering; Mining Engineering; Mineral Recourse Management

Duration: 4 years full-time (practical training and vacation work is required)

Entry qualification: Senior Certificate with university admission

Subjects required: Mathematics and Physical Science HG. A pass in English First or Second Language HG or a pass in the University's English Language Proficiency test

Selection: Academic achievement

Fees: Approximately R6300 p.a.

Venue: University of Pretoria
Afrikaans medium

B.Eng.

Fields: Industrial Engineering; Chemical Engineering; Electrical Engineering; Electronic Engineering; Agricultural Engineering; Mechanical Engineering; Metallurgical Engineering; Mining Engineering; Civil Engineering

Duration: 4 years full-time or 5 years, if the first academic year is spread over 2 years of extra-mural study

Entry qualification: Senior Certificate with university admission

Subjects required: Physical Science HG 50% (depending on field of study) and Mathematics HG 50%

Additional requirements: A certificate of health from the Medical Bureau of Industrial Illnesses for admission to Mining Engineering

Selection: Academic achievement

Fees: Industrial and Mining Eng.: R7325 p.a.; Chemical Eng.: R6985 p.a.; Electronic Eng.: R6940 p.a.; Agricultural Eng.:

R7455 p.a.; Mechanical Eng.: R7335 p.a.; Metallurgical Eng.: R7005 p.a.; Civil Eng.: R7020 p.a.

Venue: University of Durban-Westville
English medium

B.Sc.(Eng.)

Fields: Chemical Engineering; Civil Engineering; Electrical Engineering; Mechanical Engineering

Duration: 4 years

Entry qualification: Senior Certificate with university admission

Subjects required: Mathematics HG 50%

Selection: Academic achievement

Note: To assist educationally disadvantaged students to bridge the gap between matric and the first year of Engineering, a Bridging Programme is offered. The selection for this Programme is by entrance test and an interview

Fees: Approximately R5000 p.a.

Venue: University of Port Elizabeth
Afrikaans and English medium

B.Sc. (Engineering)

Duration: ONLY the first-year course for this degree is offered. A candidate who has successfully completed the first-year course, can apply to another South African university to continue his studies

Entry qualification: Senior Certificate with university admission

Subjects required: Basic requirement: A pass in Mathematics SG. Mathematics HG (E symbol) or SG (D symbol) is required for courses in Mathematics, Applied Mathematics, Statistics, Economics, Computer Science and Accounting. Mathematics SG (E symbol) is required for Mathematics Special

Fees: First year: R5640

Venue: PU (for CHE)

Afrikaans medium

B.Eng.

Fields: Chemical Engineering; Electrical and Electronic Engineering; Mechanical

Engineering; Metallurgical Engineering

Duration: 4 years

Entry qualification: Senior Certificate with university admission

Subjects required: Afrikaans First Language HG (E symbol) or Second Language HG (C symbol). If the language requirements have not been met, a course in Communication-Afrikaans should be passed during the first year. Mathematics and Physical Science HG 50% or technikon students with Mathematics T2 60% and/or Chemistry and Physics T2 50%

Selection: Selection may be required

Fees: Approximately R6580 p.a.

Venue: University of Cape Town
English medium

B.Sc. (Eng.)

Fields: Chemical Engineering; Civil Engineering; Electrical Engineering; Materials Engineering; Mechanical Engineering; Surveying and Geodetic Engineering; Electro-Mechanical Engineering

Duration: 4 years

Entry qualification: Senior Certificate with university admission

Subjects required: Mathematics and Physical Science HG (D-symbol)

Additional requirements: English language proficiency

Selection: Academic achievement

Note: An Academic Support Programme is offered to students who are not adequately prepared for tertiary studies. The Programme expands the first two years of the regular four-year engineering degree programme over three years

Fees: First year: R7000; other than first year: R7650 p.a.

Venue: University of Natal(Durban);
University of Natal(Pietermaritzburg)
English medium

B.Sc. (Eng.)

Fields: Agricultural Engineering; Civil Engineering; Electrical Engineering; Electronic Engineering; Mechanical Engineering; Chemical Engineering

Duration: 4 years (vacation work is also required)

Entry qualification: Senior Certificate with university admission

Subjects required: Mathematics HG 60% and Physical Science (or Chemistry or Physics) HG 60%

Selection: Academic achievement

Note: The first year of study may be done in either Durban or Pietermaritzburg. From the second year onwards only in Durban, except for Agricultural Engineering for which the final year must be done in Pietermaritzburg

Fees: 1993: R8130 p.a.. An approximate increase of 10% for 1994

LAND SURVEYING

Occupation(s): Land surveyor

Venue: University of Natal(Durban)
English medium

B.Sc. (Land Surveying)

Duration: 4 years (vacation work is also required)

Entry qualification: Senior Certificate with university admission

Subjects required: Mathematics and Physical Science or Chemistry or Physics HG 60%

Selection: Academic achievement

Fees: R8130 p.a. for 1993 and an increase of not less than 10% for 1994

Venue: University of Cape Town
English medium

B.Sc. (Survey.)

Duration: 4 years

Entry qualification: Senior Certificate with university admission

Subjects required: D symbol in both Mathematics and Physical Science on the HG

Additional requirements: English language proficiency

Selection: Academic achievement

Fees: First year: R7000 and other than first year: R7650 p.a.

Venue: University of Pretoria
Afrikaans medium

B.Landmeetkunde

Duration: 4 years and 6 months

Entry qualification: Senior Certificate with university admission

Subjects required: Mathematics and Physical Science HG 50%

Selection: Average St. 9 examination results

METEOROLOGY

Occupation(s): Meteorologist

Venue: University of Pretoria
Afrikaans medium

B.Sc. (Weerkunde)

Duration: 4 years

Entry qualification: Senior Certificate with university admission

Subjects required: Mathematics and Physical Science HG 50%

Selection: Average St. 9 examination results

TOWN AND REGIONAL PLANNING

Occupation(s): Town and regional planner

Venue: PU (for CHE)

Afrikaans medium

B.Art. et Scien. (Beplanning)

Duration: 4 years full-time

Entry qualification: Senior Certificate with university admission

Subjects required: Mathematics HG (E symbol) or SG (C symbol); Afrikaans HG First Language (E symbol) or Second Language (C symbol) or a course in Communication-Afrikaans passed at the University

Selection: Academic achievement and psychometric testing

Fees: Approximately R4795 p.a.

Venue: University of Pretoria
Afrikaans medium

B.Stads- en Streekbeplanning

Duration: 4 years full-time or 3 years part-time

Entry qualification: Senior Certificate with university admission

Subjects required: Mathematics HG 40% or SG 50%

Selection: Matriculation results

Fees: R5175 p.a.

Venue: University of the Witwatersrand
English medium

B.Sc. (Town and Regional Planning)

Duration: 4 years full-time

Entry qualification: Senior Certificate with university admission

Subjects required: English HG (or a pass in the University's English Proficiency test) and Mathematics HG 40% or SG 60%

Selection: Academic performance

Fees: Approximately R6300 p.a.

**STUDY OPPORTUNITIES
AT TECHNIKONS**

BRIDGING COURSES

Venue: Mangosuthu Technikon
English medium

Pre-Technical

Duration: 6 months

Entry qualification: Senior Certificate without university admission or N3 or an appropriate GCE certificate

Subjects required: Mathematics, Physical Science or Biology, English and another language

Selection: Merit

Fees: R1200 per semester

Venue: Port Elizabeth Technikon
Afrikaans and English medium

Pre-Technical Course

Fields: Analytical Chemistry, Civil Engineering, Electrical Engineering, Environmental Health, Industrial Engineering, Mechanical Engineering, Biomedical Technology or Radiography

Duration: 2 semesters

Entry qualification: Senior Certificate without university admission

Subjects required: English, Mathematics and Physical Science

Fees: R320 per subject

Venue: Border Technikon
English medium

Tertiary Foundation Course

Duration: 1 year full-time

Entry qualification: Senior Certificate without university admission

Subjects required: Mathematics F symbol and Physical Science or equivalent

Selection: Academic merit

Note: This course enables a student to further study at the Border Technikon or other tertiary institutions. 1993 information
Fees: R1660

CARTOGRAPHY

Occupation(s): Cartographer

Personal requirements: Ability to put ideas on paper, an aptitude for drawing,

good spatial perception and ability to work with detail

Nature of work: Compiles maps from photographs, field records, manuscripts, other maps and statistical reports; processes source material, applies photolithography, photographic processing techniques and computer technology

Venue: Technikon Pretoria
Afrikaans or English medium

National Diploma: Cartography

Duration: 3 years: 4 semesters theoretical training and 2 semesters experiential training

Entry qualification: Senior Certificate without university admission with a maximum of two subjects on LG. Subjects on LG are acceptable only if not required in the programme of study

Subjects required: Mathematics and Physical Science HG (E symbol) or SG (C symbol)

Selection: Academic achievement

Fees: First semester: R224 - R480 per subject; second semester: R254 - R452 per subject; third semester: R386 - R456 per subject; fourth semester: R386 - R506 per subject

Venue: Cape Technikon
Afrikaans or English medium

National Diploma: Cartography

Duration: 3 years full-time

Entry qualification: Senior Certificate without university admission with six subjects (only subjects on HG and SG are acceptable)

Subjects required: First Language HG and Second Language SG. Mathematics SG (D symbol) or HG (E symbol) or N4 Mathematics (at least 50%)

Selection: Psychometric tests, aptitude tests or personal interview

Fees: Approximately R3000 - R6000 p.a.

CHEMICAL ENGINEERING

Occupation(s): Chemical engineering technician

Personal requirements: Technical, practical, an enquiring mind, systematic and analytical

Nature of work: Runs a section of a chemical plant, leads a group of workers, collects information related to a chemical process, analyses samples, solves technical problems and spends time in an office calculating and preparing reports

Venue: Vaal Triangle Technikon
Afrikaans and English medium
National Diploma in Chemical Engineering

Duration: 3 years full-time

Entry qualification: Senior Certificate without university admission with at least 4 subjects on HG or SG (official languages included)

Subjects required: Mathematics and Physical Science HG (E symbol) or SG (D symbol)

Selection: Points system

Fees: First semester: R2120; second semester: R2102; third semester: R2101; fourth semester: R250

Venue: Cape Technikon
Afrikaans or English medium
National Diploma in Chemical Engineering

Duration: 3 years full-time: 24 months formal training and 12 months appropriate experiential training

Entry qualification: Senior Certificate without university admission with six subjects at HG and/or SG and a D aggregate

Subjects required: Mathematics and Physical Science SG (D symbol) and Afrikaans and English (with the First Language on HG)

Selection: Psychometric tests, aptitude tests or personal interview

Fees: Approximately R3000 - R6000 p.a.

Venue: Mangosuthu Technikon
English medium
National Diploma: Chemical Engineering

Duration: 2 years formal training and 1 year experiential training

Entry qualification: Senior Certificate without university admission

Subjects required: Mathematics and Physical Science

Selection: Academic achievement

Fees: R1960 per semester

Venue: Technikon Natal
Afrikaans or English medium
National Diploma in Chemical Engineering

Duration: 1 year experiential training and 2 years formal training

Entry qualification: Senior Certificate without university admission with a minimum of 4 subjects on HG and/or SG, official languages included. LG subjects are acceptable only if not required in the programme of study

Subjects required: English First Language HG (E symbol) or SG (D symbol) or English Second Language HG (C symbol) or SG (B symbol). Mathematics and Physical Science, both on HG

Fees: R2590 per semester (R600 per subject)

Venue: M.L. Sultan Technikon
English medium
National Diploma in Chemical Engineering

Duration: 3 years full-time (experiential training included)

Entry qualification: Senior Certificate without university admission with subjects on the HG or SG

Subjects required: Mathematics HG (E symbol) or SG (C symbol) and Physical Science

Subjects recommended: Technical Drawing

Selection: Academic achievement

Fees: R3720 p.a.

Venue: Peninsula Technikon
Afrikaans or English medium

National Diploma in Chemical Engineering

Duration: 3 years full-time: 24 months formal training and 12 months appropriate experiential training

Entry qualification: Senior Certificate without university admission

Subjects required: Physical Science and Mathematics HG (E symbol) or SG (D symbol)

Selection: Academic achievement

Fees: Approximately R161 - R393 per subject

Venue: Technikon Witwatersrand Afrikaans or English medium

National Diploma in Chemical Engineering

Duration: 3 years full-time

Entry qualification: Senior Certificate without university admission

Subjects required: Mathematics and Physical Science HG (E symbol) or SG (C symbol) and a pass in English

Selection: Selection test

Fees: Approximately R760 per subject p.a. or approximately R380 per subject per semester

Venue: Technikon Northern Transvaal English medium

National Diploma in Chemical Engineering

Duration: 6 semesters full-time: 4 semesters formal training and 2 semesters experiential training

Entry qualification: Senior Certificate without university admission (C symbol aggregate) OR successful completion of the Potentiality Development Programme OR N4 with at least 5 appropriate subjects

Subjects required: Senior Certificate: Mathematics (C symbol), Physical Science and English. N4: Mathematics (60%) and English

Selection: Aptitude tests

Note: A Potentiality Development Programme is available for students who do not meet the selection criteria in terms of

school symbols. A Senior Certificate without university admission with a HG pass or an E symbol in Mathematics and Physical Science and a pass in English, is required for admission to this programme. 1993 information

Fees: 1994: R360 per subject per semester

CIVIL ENGINEERING

Occupation(s): Civil engineering technician

Personal requirements: Mathematical ability, ability to think logically, to make decisions independently, to communicate verbally and graphically, to work systematically and as one of a team

Nature of work: Planning, design, layout, building and maintenance of projects on roads, airports, buildings, dams, irrigation schemes, water supply and purification works

Venue: Technikon Witwatersrand

Afrikaans or English medium

National Diploma: Engineering: Civil

Duration: 3 years full-time

Entry qualification: Senior Certificate without university admission

Subjects required: First Language HG (D symbol), Second Language HG (E symbol), Mathematics HG (D symbol) and Physical Science

Subjects recommended: Computer Science, Geography

Selection: Selection tests and personal interview (if required)

Fees: Approximately R760 per subject p.a. or approximately R380 per subject per semester

Venue: Peninsula Technikon

Afrikaans or English medium

National Diploma in Civil Engineering

Duration: 3 years full-time: 24 months formal training and 12 months appropriate experiential training

Entry qualification: Senior Certificate without university admission or NTC III

Subjects required: Mathematics HG or

SG for Senior Certificate. Mathematics and First and Second Language SG for NTC III

Subjects recommended: Woodwork, Physical Science, Technical Drawings
Selection: Academic achievement
Fees: Approximately R15 - R236 per subject

Venue: Technikon Pretoria

Afrikaans or English medium

National Diploma: Engineering: Civil

Duration: 3 years full-time: 24 months formal training and 12 months experiential training

Entry qualification: Senior Certificate without university admission with a maximum of two subjects on LG. Subjects on LG are acceptable only if not required in the programme of study

Subjects required: Mathematics and Physical Science HG (E symbol) or SG (C symbol)

Selection: Academic achievement

Fees: First semester: R224 - R486 per subject; second semester: R254 - R452 per subject; third semester: R398 - R428 per subject; fourth semester: R406 - R436 per subject

Venue: Cape Technikon

Afrikaans or English medium

National Diploma in Civil Engineering

Duration: 3 years full-time

Entry qualification: Senior Certificate without university admission with six subjects (only subjects on HG and SG are acceptable)

Subjects required: First Language HG and Second Language SG. Mathematics SG (D symbol) or HG (E symbol) or N4 Mathematics (at least 50%) and Physical Science

Selection: Psychometric tests, aptitude tests or personal interview

Fees: Approximately R3000 - R6000 p.a.

Venue: Technikon Northern Transvaal

English medium

National Diploma in Civil Engineering

Duration: 6 semesters full-time: 4 semesters formal training and 2 semesters experiential training

Entry qualification: Senior Certificate without university admission (C symbol aggregate) OR successful completion of the Potentiality Development Programme OR N4 with at least 5 appropriate subjects

Subjects required: Senior Certificate: Mathematics (C symbol), Physical Science and English. N4: Mathematics (60%) and English

Selection: Aptitude tests

Note: A Potentiality Development Programme is available for students who do not meet the selection criteria in terms of school symbols. A Senior Certificate without university admission with a HG pass or an E symbol in Mathematics and Physical Science and a pass in English, is required for admission to this programme. 1993 information

Fees: 1994: R360 per subject per semester

Venue: Transkei Technikon

English medium

National Diploma: Civil Engineering

Duration: 3 years full-time (6 months experiential training included)

Entry qualification: Senior Certificate without university admission

Selection: Candidates subject to selection
Fees: R3950 p.a.

Venue: M.L. Sultan Technikon

English medium

National Diploma in Civil Engineering

Duration: 3 years full-time: 2 years formal training and 1 year experiential training

Entry qualification: Senior Certificate without university admission with subjects on HG or SG

Subjects required: Mathematics HG, English First Language, Physics or Physical Science and/or Technical Drawing

Selection: Merit

Fees: R3720 p.a.

Venue: Vaal Triangle Technikon
Afrikaans and English medium

National Diploma: Engineering: Civil

Duration: 3 years full-time

Entry qualification: Senior Certificate without university admission with at least 4 subjects on HG or SG OR N3 with a minimum of 4 subjects (minimum pass mark 50%)

Subjects required: Senior Certificate: Mathematics, Physical Science and both official languages HG or SG. N3: Mathematics and Engineering Science (50%) plus English and Afrikaans on N3 level

Selection: Points system

Fees: First semester: R2015; second semester: R2103; third semester: R2027; fourth semester: R2027

Venue: Technikon OFS
Afrikaans or English medium

National Diploma in Civil Engineering

Duration: 3 years full-time: 2 years formal training and 1 year experiential training

Entry qualification: Senior Certificate without university admission with a minimum of 5 subjects on HG and/or SG, official languages included. A subject on LG is acceptable only if not required in the programme of study

Subjects required: Mathematics and Physical Science HG or SG

Selection: Academic achievement and personal interview if necessary

Fees: R160 - R315 per subject

Venue: Technikon Natal
Afrikaans or English medium

National Diploma: Engineering: Civil

Duration: 3 years: 2 years formal training and 1 year experiential training

Entry qualification: Senior Certificate without university admission with a minimum of 4 subjects on HG and/or SG, official languages included. LG subjects

are acceptable only if not required in the programme of study

Subjects required: English First Language HG (E symbol) or SG (D symbol) or English Second Language HG (C symbol) or SG (B symbol) and Mathematics HG (E symbol) or SG (D symbol)

Selection: Academic achievement

Fees: First and third year: R2640 per semester (R615 per subject)

Venue: Port Elizabeth Technikon
Afrikaans and English medium

National Diploma in Civil Engineering

Duration: 3 years full-time: 24 months formal training and 12 months appropriate experiential training

Entry qualification: Senior Certificate without university admission and without any lower grade subjects

Subjects required: First Language HG (E symbol) or SG (D symbol), Mathematics and Physical Science

Selection: Academic merit

Fees: R190 - R380 per subject

Venue: Mangosuthu Technikon
English medium

National Diploma: Engineering: Civil

Duration: 3 years: 4 semesters formal training and 2 semesters experiential training

Entry qualification: Senior Certificate without university admission

Subjects required: English, Mathematics and a science subject

Selection: Candidates subject to selection
Note: Students would normally be required to complete the Pre-Technicians Course successfully before being admitted to the first year

Fees: R1960 per semester

CIVIL ENGINEERING: AGRICULTURE

Occupation(s): Civil engineering technician (Agriculture)

Personal requirements: Ability to work as part of a team, to be creative, analytical, a keen interest in agricultural activities and good speech and writing ability

Nature of work: The work may comprise dam construction and design, drainage systems, irrigation systems (flood and sprinkling systems), flood systems to control run-off water, the control of erosion, watering places for livestock, structures and many more interesting activities

Venue: Technikon OFS

Afrikaans or English medium

National Diploma in Civil Engineering (Agriculture)

Duration: 3 years full-time: 2 years formal training and 1 year appropriate in-service training

Entry qualification: Senior Certificate without university admission with a minimum of 5 subjects on HG and/or SG, official languages included. A subject on LG is acceptable only if not required in the programme of study

Subjects required: Mathematics and Physical Science HG or SG

Selection: Academic achievement and personal interview if necessary

Fees: R160 - R315 per subject

Venue: Technikon Pretoria

Afrikaans or English medium

National Diploma: Civil Engineering: Agriculture

Duration: 3 years: 24 months formal training and 12 months experiential training

Entry qualification: Senior Certificate without university admission with a maximum of two subjects on LG. Subjects on LG are acceptable only if not required in the programme of study

Subjects required: Mathematics and Physical Science HG (E symbol) or SG (C symbol)

Subjects recommended: Mechanics and Technical Drawing

Selection: Academic achievement

Fees: First semester: R372 - R418 per

subject; second semester: R348 - R450 per subject; third semester: R384 - R464 per subject; fourth semester: 4 subjects @ R394 per subject

COAL MINING

Occupation(s): Mining technician

Personal requirements: Physically active, able to work underground, to adapt to change and able to work with people of all races

Nature of work: Runs a production section, makes logical decisions, applies theory to practical situations and makes technical contributions to the economical and operational aspects of mining

Venue: Technikon SA

Afrikaans or English medium

National Diploma: Coal Mining

Correspondence course;

Duration: 3 years

Entry qualification: Senior Certificate without university admission with a maximum of two subjects on LG (the two subjects on LG must exclude the official languages)

Subjects required: Mathematics

Subjects recommended: Chemistry, Physics

Additional requirements: Employed on a mine or be in a mining related career

Fees: R430 per subject

Venue: Technikon Witwatersrand

Afrikaans or English medium

National Diploma: Coal Mining

Duration: 3 years full-time (experiential training included)

Entry qualification: Senior Certificate without university admission

Subjects required: Mathematics HG (E symbol) or SG (D symbol)

Subjects recommended: Physical Science

Additional requirements: A physical fitness 'Red Ticket' from the Medical Bureau is required

Selection: Merit and interviews

Note: A Pre-Technicians' programme is

available for persons who do not comply with the minimum entrance requirements
Fees: Approximately R480 per subject

COMPUTER SYSTEMS

Occupation(s): Computer systems technician

Personal requirements: Good eyesight and colour-sensitiveness, ability to communicate, manual dexterity and good eye-hand co-ordination

Nature of work: Responsible for the installation, maintenance and repair of the computer

Venue: Cape Technikon

Afrikaans or English medium

National Diploma: Computer Systems

Duration: 3 years: 2 years formal training and 1 year experiential training

Entry qualification: Senior Certificate without university admission with six subjects at HG and/or SG

Subjects required: Afrikaans and English: First Language HG and Second Language SG. Mathematics and Physical Science HG (E symbol) or SG (D symbol) or N4 Mathematics and another related engineering subject such as N4 Electrotechnics, N4 Digital Electronics or N4 Engineering Science

Selection: Academic achievement. Candidates shall also be subjected to psychometric and aptitude evaluation, language proficiency tests, etc.

Fees: Approximately R3000 - R6000 p.a.

Venue: Technikon Pretoria

Afrikaans or English medium

National Diploma: Computer Systems

Duration: 3 years full-time: 4 semesters formal training and 2 semesters experiential training

Entry qualification: Senior Certificate without university admission with a maximum of two subjects on LG. Subjects on LG are acceptable only if not required in the programme of study

Subjects required: Physical Science and

Mathematics HG 50% or SG 60%

Selection: Selection test

Fees: First semester: R194 - R462 per subject; second semester: R386 - R472 per subject; third semester: R434 - R484 per subject; fourth semester: R398 - R746 per subject

Venue: M.L. Sultan Technikon

English medium

National Diploma: Computer Systems

Duration: 3 years full-time: 2 years formal training and 1 year in-service training

Entry qualification: Senior Certificate without university admission with subjects on the HG or SG

Subjects required: Mathematics HG (E symbol) or SG (D symbol)

Subjects recommended: Physical Science

Selection: Merit

Fees: R1860 per semester

Venue: Setlogelo Technikon

English medium

National Diploma: Computer Systems

Duration: 3 years: 2 years formal training and 1 year in-service training

Entry qualification: Senior Certificate without university admission (E symbol)

Subjects required: Mathematics HG (E symbol) or SG (D symbol)

Subjects recommended: Accounting, English, Mathematics

Selection: Points system

Fees: R175 per subject per semester

Venue: Vaal Triangle Technikon

Afrikaans and English medium

National Diploma: Computer Systems

Duration: 3 years full-time

Entry qualification: Senior Certificate without university admission with at least 4 subjects on HG or SG (official languages included)

Subjects required: Mathematics HG or SG

Subjects recommended: Computer Science, Physical Science

Selection: Points system

Fees: First semester: R2297; second semester: R2209; third semester: R2190; fourth semester: R1790

COMPUTER SYSTEMS (ENGINEERING)

Venue: Technikon OFS

Afrikaans or English medium

National Diploma: Computer Systems (Engineering)

Duration: 3 years: 2 years formal training and 1 year experiential training

Entry qualification: Senior Certificate without university admission with a minimum of 5 subjects on HG and/or SG, official languages included. A subject on LG is acceptable only if not required in the programme of study

Subjects required: Mathematics and Physical Science HG or SG

Selection: Academic achievement and personal interview if necessary

Fees: R160 - R315 per subject

DRILLING PRACTICE

Venue: Technikon SA

Afrikaans and English medium

National Diploma: Drilling Practice

Correspondence course;

Duration: 3 years

Entry qualification: Senior Certificate without university admission with a maximum of two subjects on LG (the two subjects on LG must exclude the two official languages)

Subjects required: Mathematics

Subjects recommended: Chemistry, Physics

Additional requirements: Students must be employed in drilling practice or related career

Fees: R430 per subject

ECONOMIC GEOLOGY

Occupation(s): Geotechnician (Economic)

Personal requirements: Self-reliant, dynamic, interested in science and natural history, healthy and will enjoy a physically active job

Nature of work: Must be prepared to work under a variety of conditions, including underground and in the open. Runs a geology department on a mine and organise programmes of prospecting in the field

Venue: Technikon Witwatersrand

Afrikaans or English medium

National Diploma: Economic Geology

Duration: 3 years full-time (experiential training included)

Entry qualification: Senior Certificate without university admission

Subjects required: Mathematics and Physical Science HG (E symbol) or SG (D symbol)

Additional requirements: A physical fitness 'Red Ticket' from the Medical Bureau is required

Selection: Merit and interviews

Note: A Pre-Technicians' programme is available for persons who do not comply with the minimum entrance requirements

Fees: Approximately R480 per subject

ELECTRICAL ENGINEERING

Occupation(s): Electrical engineering technician

Personal requirements: An interest in science, good colour vision, enjoys solving problems, ability to apply ideas in practice and to work independently

Nature of work: Light Current-/Electronics: these fields include telecommunications, radio and television, radar, computers, electronic control systems, etc. Technicians in these fields will be involved in the development of new equipment as well as installation and maintenance. Heavy current: The activities of heavy current technicians are related to the gene-

ration and the distribution of electricity. Their work ranges from design, development and erection of equipment, maintenance and repair

Venue: Technikon SA

English and Afrikaans medium

National Diploma: Electrical Engineering: Electronics and Electronic Communication

Correspondence course;

Duration: 3 years

Entry qualification: Senior Certificate without university admission with a maximum of two subjects on LG (the two subjects on LG must exclude the official languages) OR N3 with at least four N3 subjects, with a minimum of 50%

Subjects required: Senior Certificate: Mathematics and Physical Science HG or SG and at least two languages on HG or SG. N3: Mathematics N3 and Engineering N3 and at least two languages on HG or SG

Additional requirements: Students must be employed in a field related to engineering

Note: NB: This course will possibly be presented in 1994, subject to approval

Fees: R430 per subject

Venue: Peninsula Technikon

Afrikaans or English medium

National Diploma: Electrical Engineering

Fields: Light Current; Heavy Current

Duration: 3 years full-time: 24 months formal training and 12 months appropriate in-service training

Entry qualification: Senior Certificate without university admission or N3

Subjects required: Mathematics and Physical Science HG (E symbol) or SG (D symbol) for Senior Certificate. Engineering Science N4 and Mathematics N4 (C symbol) and both official languages for the N3 Certificate

Selection: Academic achievement and aptitude test

Fees: Approximately R161 - R310 per subject

Venue: Technikon Northern Transvaal

English medium

National Diploma: Electrical Engineering

Fields: Electronic Communication; Heavy Current; Process Instrumentation

Duration: 6 semesters full-time: 4 semesters formal training and 2 semesters experiential training

Entry qualification: Senior Certificate without university admission (C symbol aggregate) OR successful completion of the Potentiality Development Programme OR N4 with at least 5 appropriate subjects

Subjects required: Senior Certificate: Mathematics (C symbol), Physical Science and English. Mathematics (60%) and English

Selection: Aptitude tests

Note: The Potentiality Development Programme is available for students who do not meet the selection criteria in terms of school symbols. A Senior Certificate without university admission with a HG pass or an E symbol in Mathematics and Physical Science and a pass in English, is required for admission to this programme. 1993 information

Fees: 1994: R360 per subject per semester

Venue: Transkei Technikon

English medium

National Diploma: Electrical Engineering

Fields: Heavy Current; Light Current

Duration: 3 years full-time (6 months experiential training included)

Entry qualification: Senior Certificate without university admission

Selection: Candidates subject to selection

Fees: R3950 p.a.

Venue: Cape Technikon

Afrikaans or English medium

National Diploma: Electrical Engineering

Duration: 3 years full-time: 2 years formal training and 1 year experiential training

Entry qualification: Senior Certificate without university admission with six

subjects on HG and/or SG

Subjects required: English and Afrikaans: First Language HG, Second Language SG. Mathematics and Physical Science HG (E symbol) or SG (D symbol) OR N4 Mathematics and another related engineering subject such as N4 Electrotechnics, N4 Digital Electronics or N4 Engineering Science with a course mark of at least 60%
Selection: Academic achievement. Candidates shall also be subjected to a selection procedure which may include psychometric and aptitude evaluation, language proficiency tests, etc.

Fees: Approximately R3000 - R6000 p.a.

Venue: Technikon Witwatersrand

Afrikaans or English medium

National Diploma: Electrical Engineering

Duration: 3 years full-time

Entry qualification: Senior Certificate without university admission

Subjects required: First Language HG (E symbol), Second Language SG (D symbol), Mathematics and Physical Science HG (E symbol) or SG (D symbol)

Selection: Selection test and personal interview

Fees: Approximately R760 per subject p.a. or approximately R380 per subject per semester

Venue: Technikon SA

English and Afrikaans medium

National Diploma: Electrical Engineering: Heavy Current

Correspondence course;

Duration: 3 years

Entry qualification: Senior Certificate without university admission with a maximum of two subjects on LG (the two subjects on LG must exclude the official languages) OR N3 with at least four N3 subjects, with a minimum of 50%

Subjects required: Senior Certificate: Mathematics and Physical Science HG or SG and at least two languages on HG or SG. N3: Mathematics N3 and Engineering Science N3 and at least two languages on

HG or SG

Additional requirements: Students must be employed in a field related to engineering

Note: NB: This course will possibly be presented in 1994, subject to approval

Fees: R430 per subject

Venue: Technikon Pretoria; Technikon Pretoria (Kwamhlanga Campus); Technikon Pretoria (Nelspruit Campus); Technikon Pretoria (Witbank Campus)

Afrikaans or English medium

National Diploma: Electrical Engineering

Fields: Digital Technology; Power Engineering; Clinical and Analogue Engineering; Process Instrumentation and Control; Avionics; High Frequency Technology

Duration: 3 years full-time: 24 months formal training and 12 months experiential training

Entry qualification: Senior Certificate without university admission with a maximum of two subjects on LG. Subjects on LG are acceptable only if not required in the programme of study

Subjects required: Mathematics and Physical Science HG (E symbol) or SG (D symbol). Mathematics and Physical Science HG (D symbol) or SG (C symbol) is required for the Avionics option

Selection: Academic achievement

Fees: Approximately R224 - R484 per subject

Venue: Technikon SA

English and Afrikaans medium

National Diploma: Electrical Engineering: Process Instrumentation

Correspondence course;

Duration: 3 years

Entry qualification: Senior Certificate without university admission with a maximum of two subjects on LG (the two subjects on LG must exclude the official languages) OR N3 with at least four N3 subjects, with a minimum of 50%

Subjects required: Senior Certificate: Mathematics and Physical Science HG or

SG and at least two languages on HG or SG. N3: Mathematics N3 and Engineering Science N3 and at least two languages on HG or SG

Additional requirements: Students must be employed in a field related to engineering

Note: NB: This course will possibly be presented in 1994, subject to approval

Fees: R430 per subject

Venue: Technikon Natal

Afrikaans or English medium

National Diploma in Electrical Engineering: Heavy Current

Duration: 3 years full-time: 2 years formal training and 1 year experiential training

Entry qualification: Senior Certificate without university admission with a minimum of 4 subjects on HG and/or SG, official languages included. LG subjects are acceptable only if not required in the programme of study

Subjects required: English First Language HG (E symbol) or SG (D symbol) or English Second Language HG (C symbol) or SG (B symbol) and good passes in Mathematics and Physical Science

Fees: R2617 per semester (R607 per subject)

Venue: Vaal Triangle Technikon

Afrikaans and English medium

National Diploma: Electrical Engineering

Fields: Electronics; Electronic Communication; Instrumentation; Heavy Current

Duration: 3 years full-time

Entry qualification: Senior Certificate without university admission with 4 subjects on HG or SG (official languages included) OR N3 with 4 subjects (50%) plus both official languages at Senior Certificate level

Subjects required: Mathematics and Physical Science HG or SG

Selection: Points system

Fees: First semester: R2215; second semester: R1895; third semester: R2089;

fourth semester: R2115

Venue: M.L. Sultan Technikon

English medium

National Diploma: Electrical Engineering

Duration: 3 years full-time: 2 years formal training and 1 year experiential training

Entry qualification: Senior Certificate without university admission with subjects on HG or SG

Subjects required: Mathematics HG, English First Language and Physical Science or Physics

Selection: Merit

Fees: R3720 p.a.

Venue: Technikon Natal

Afrikaans or English medium

National Diploma: Electrical Engineering

Fields: Radio Communication; Process Instrumentation and Control

Duration: 3 years full-time: 2 years formal training and 1 year experiential training

Entry qualification: Senior Certificate without university admission with a minimum of 4 subjects on HG and/or SG, official languages included. LG subjects are acceptable only if not required in the programme of study

Subjects required: English First Language HG (E symbol) or SG (D symbol) or English Second Language HG (C symbol) or SG (B symbol) and a good pass in Mathematics and Physical Science

Fees: R2640 per semester (R615 per subject)

Venue: Mangosuthu Technikon

English medium

National Diploma: Electrical Engineering

Duration: 4 semesters formal training and 2 semesters experiential training

Entry qualification: Senior Certificate without university admission or N3

Subjects required: Mathematics, Physical Science and English

Selection: Candidates subject to selection
Note: Students are normally required to attend and pass the Pre-Technical Course, before being admitted to level 1
Fees: R1960 per semester

Venue: Port Elizabeth Technikon
Afrikaans and English medium
National Diploma: Electrical Engineering
Duration: 3 years full-time: 24 months formal training and 12 months appropriate experiential training
Entry qualification: Senior Certificate without university admission without any lower grade subjects OR a N3 certificate with four subjects plus both official languages
Subjects required: First Language HG (E symbol) or SG (D symbol) and a good pass mark in Mathematics and Physical Science or Physics for Senior Certificate. N3 Certificate: Mathematics and Engineering Science (C symbol) and both official languages at Senior Certificate level
Selection: Academic achievement
Fees: R190 - R470 per subject

Venue: Technikon OFS
Afrikaans or English medium
National Diploma: Electrical Engineering
Fields: Heavy Current; Light Current
Duration: 3 years full-time: 24 months formal training and 12 months appropriate experiential training
Entry qualification: Senior Certificate without university admission with a minimum of 5 subjects on HG and/or SG, official languages included. A subject on LG is acceptable only if not required in the programme of study
Subjects required: Mathematics and Physical Science HG or SG
Selection: Academic achievement and personal interview if necessary
Fees: R160 - R315 per subject

EXTRACTION METALLURGY

Occupation(s): Metallurgical engineering

technician

Personal requirements: Mathematical aptitude, scientific interest, logical thinking, problem solving skills and self-discipline

Nature of work: Extraction metallurgy is the process by which the valuable constituents are obtained from ore

Venue: Technikon Witwatersrand
Afrikaans or English medium
National Diploma: Extraction Metallurgy
Duration: 3 years full-time (experiential training included)
Entry qualification: Senior Certificate without university admission
Subjects required: Physical Science and Mathematics HG (D symbol) or SG (C symbol)
Additional requirements: A physical fitness 'Red Ticket' from the Medical Bureau is required
Selection: Merit and interviews
Note: A Pre-Technician programme is available for candidates who do not comply with the minimum entrance requirements
Fees: Approximately R480 per subject

INDUSTRIAL ENGINEERING

Occupation(s): Industrial engineering technician

Personal requirements: Scientific approach, objective, able to turn out detailed work and maintain good human relations
Nature of work: Identifies problems, suggests improvements and implements new work situations. Engineers optimum work conditions in a cost effective way to meet the physical and psychological requirements of employees

Venue: Cape Technikon
Afrikaans or English medium
National Diploma: Industrial Engineering
Duration: 3 years full-time: 2 years formal training and 1 year appropriate experiential training
Entry qualification: Senior Certificate

without university admission with six subjects at HG or SG and a D symbol aggregate or the N4 Certificate

Subjects required: First Language HG and Second Language SG, Mathematics and Physical Science HG (E symbol) or SG (D symbol) or minimum 60% for N4. Functional Mathematics not accepted

Selection: Psychometric or aptitude tests or personal interview

Note: Functional Mathematics not acceptable

Fees: Approximately R3000 - R6000 p.a.

Venue: Port Elizabeth Technikon

Afrikaans and English medium

National Diploma: Industrial Engineering

Duration: 3 years full-time: 2 years formal training and 1 year appropriate in-service training

Entry qualification: Senior Certificate without university admission (HG or SG subjects only) or N3 with two languages at Senior Certificate level

Subjects required: First Language, Mathematics and Physical Science HG (E symbol) or SG (D symbol) for Senior Certificate. At least 50% for Mathematics and Applied Science for the N3 Certificate

Selection: Academic achievement

Fees: R140 - R380 per subject

Venue: Technikon Pretoria

Afrikaans and English medium

National Diploma: Industrial Engineering

Duration: 3 years full-time: 2 years formal training and 1 year appropriate experiential training

Entry qualification: Senior Certificate without university admission with a maximum of two LG subjects. LG subjects are acceptable only if not required in the programme of study

Subjects required: Mathematics HG 40% or SG 50%

Selection: Admission subject to selection

Fees: First semester: R254- R412 per

subject; second semester: R370 - R504 per subject; third semester: R384 - R564 per subject; fourth semester: R380 - R444 per subject

Venue: M.L. Sultan Technikon

English medium

National Diploma: Industrial Engineering

Duration: 3 years full-time: 2 years formal training and 1 year experiential training

Entry qualification: Senior Certificate without university admission (HG or SG subjects only) or N3

Subjects required: Mathematics HG and a pass in Physical Science and English First Language (or another language) for Senior Certificate or a pass in English and Afrikaans (or another language), Mathematics and Applied Science for N3

Selection: Academic achievement

Fees: R3720 p.a.

Venue: Technikon Witwatersrand

Afrikaans or English medium

National Diploma: Industrial Engineering

Duration: 3 years full-time

Entry qualification: Senior Certificate without university admission

Subjects required: Physical Science, Mathematics and one official language HG (E symbol) or SG (D symbol)

Subjects recommended: Technical Drawing HG (E symbol) or SG (D symbol)

Selection: Selection is required

Fees: Approximately R380 per subject per semester

Venue: Vaal Triangle Technikon

Afrikaans and English medium

National Diploma: Industrial Engineering

Duration: 3 years (experiential training included)

Entry qualification: Senior Certificate without university admission with at least

four subjects on HG or SG or on N3 level
Subjects required: Both official languages, Mathematics and Physical Science HG or SG. At least 50% is required for N3 Mathematics and Engineering Science. Another language may be offered as an alternative to Afrikaans or English
Selection: Point rating system and possible placement test
Fees: First semester R2128; second semester: R2088; third semester: R1753; fourth semester: R2088

MARITIME STUDIES

Occupation(s): Deck officer
Personal requirements: Physically fit, fond of the sea and able to get along with people
Nature of work: Responsible for navigation, maintenance of the hull and deck equipment and the loading, unloading and storage of cargo

Venue: Technikon Natal
Afrikaans or English medium
National Diploma: Maritime Studies
Duration: 3 years: 18 months formal training and 18 months experiential training
Entry qualification: Senior Certificate without university admission (maximum of two LG subjects, official languages excluded and LG subjects acceptable only if not required in the programme of study)
Subjects required: Mathematics and another natural science subject. English First Language HG (E symbol) or SG (D symbol) or English Second Language HG (C symbol) or SG (B symbol)
Fees: R2760 per semester or R620 per subject

MECHANICAL ENGINEERING

Occupation(s): Mechanical engineering technician
Personal requirements: Capacity to think, sound judgement and ability to supervise others in their technical and administrative

work
Nature of work: Involved with the design, construction and maintenance of equipment and responsible for applying proven techniques to carry the engineer's design through to its practical conclusion

Venue: Vaal Triangle Technikon
Afrikaans or English medium
National Diploma: Mechanical Engineering
Duration: 3 years (experiential training included)
Entry qualification: Senior Certificate without university admission with at least 4 subjects on HG or SG or on N3 level
Subjects required: Both official languages, Mathematics and Physical Science HG or SG. A minimum of 50% for N3 Mathematics and Engineering Science. Another language may be offered as an alternative for Afrikaans or English
Selection: Point rating system and possible placement test
Fees: First semester: R2215; second semester R1753; third and fourth semester R2088 per semester

Venue: Technikon Witwatersrand
Afrikaans or English medium
National Diploma: Mechanical Engineering
Duration: 3 years
Entry qualification: Senior Certificate without university admission or N3 with the necessary requirements
Subjects required: Mathematics and Physical Science HG (E symbol) or SG (C symbol). First Language HG (E symbol) or SG (D symbol)
Subjects recommended: Technical Drawing and Computer Science
Selection: Personal interview and selection test
Fees: Approximately R380 per subject per semester

Venue: Cape Technikon
Afrikaans or English medium

National Diploma: Mechanical Engineering

Duration: 3 years full-time: 2 years formal training and 1 year appropriate experiential training

Entry qualification: Senior Certificate without university admission with six subjects at HG or SG and a D symbol aggregate

Subjects required: First Language HG and Second Language SG. Mathematics and Physical Science SG (D symbol) or HG (E symbol) for Senior Certificate or at least 60% for N4

Selection: Psychometric or aptitude tests or a personal interview

Fees: Approximately R3000 - R6000 p.a.

Venue: M.L. Sultan Technikon

English medium

National Diploma: Mechanical Engineering

Duration: 3 years full-time: 2 years formal training and 1 year experiential training

Entry qualification: Senior Certificate without university admission (HG or SG subjects only) or N3

Subjects required: Mathematics HG, Physical Science and English First Language (or another language) for Senior Certificate OR Mathematics, Applied Science, English and Afrikaans (or another language) for the N3 Certificate

Selection: Academic achievement

Fees: R3720 p.a.

Venue: Technikon Northern Transvaal

English medium

National Diploma: Mechanical Engineering

Fields: Fitting and Turning; Welding and Metalwork; Motor Mechanics

Duration: 3 years: 4 semesters formal training and 2 semesters experiential training

Entry qualification: Senior Certificate without university admission and a minimum C symbol aggregate or the N4 Cer-

tificate with at least five appropriate subjects or the successful completion of a Potentiality Development Programme of the Technikon

Subjects required: A pass in English and Physical Science and at least a C symbol in Mathematics, is required for the Senior Certificate. A pass in English and 60% in Mathematics, is required for the N4 Certificate

Selection: An aptitude test

Note: A Potentiality Development Programme is available for students who do not meet the selection criteria in terms of school symbols. A Senior Certificate without university admission with a HG pass or an E symbol in Mathematics and Physical Science and a pass in English, is required for admission to this programme. 1993 information

Fees: 1994: R360 per subject per semester

Venue: Technikon OFS

Afrikaans or English medium

National Diploma: Mechanical Engineering

Duration: 3 years full-time or part-time: 2 years formal training and 1 year experiential training

Entry qualification: Senior Certificate without university admission with a minimum of 5 HG or SG subjects, including the official languages. A LG subject is acceptable only if it is not required in the programme of study

Subjects required: Mathematics and Physical Science. At least a C symbol for Functional Mathematics

Selection: Academic achievement and possible interview

Fees: R315 per subject per semester; Mechanical Engineering Practice: R160 per subject per semester

Venue: Technikon Natal

Afrikaans or English medium

National Diploma: Mechanical Engineering

Duration: 2 years formal training and 1

year experiential training

Entry qualification: Senior Certificate without university admission (maximum of two LG subjects, official languages excluded and LG subjects acceptable only if not required in the programme of study)

Subjects required: English First Language HG (E symbol) or SG (C symbol) or English Second Language HG (C symbol) or SG (B symbol)

Subjects recommended: Mathematics and Physical Science HG

Selection: Academic achievement

Note: Preference to students with HG passes in Mathematics, Physical Science and English First Language

Fees: R2590 per semester or R600 per subject

Venue: Peninsula Technikon

Afrikaans or English medium

National Diploma: Mechanical Engineering

Duration: 3 years full-time, including appropriate experiential training

Entry qualification: Senior Certificate without university admission or N3

Subjects required: Mathematics and Physical Science HG (D symbol) or SG (C symbol) (for Senior Certificate). A pass in the official languages at standard 10 level plus Mathematics and Engineering Science at N3 and N4 level for the N3 Certificate
Fees: Approximately R161 - R310 per subject

Venue: Port Elizabeth Technikon

Afrikaans and English medium

National Diploma: Mechanical Engineering

Duration: 3 years full-time: 2 years formal training and 1 year appropriate in-service training

Entry qualification: Senior Certificate without university admission (HG or SG subjects only) or the N3-Certificate plus two languages at Senior Certificate level

Subjects required: First Language, Mathematics and Physical Science HG (E

symbol) or SG (D symbol) for Senior Certificate. A minimum of 50% for Mathematics and Applied Science for N3-Certificate

Selection: Academic achievement

Fees: R140 - R380 per subject

Venue: Mangosuthu Technikon

English medium

National Diploma: Mechanical Engineering

Fields: General; Motor Vehicle

Duration: 3 years: 4 semesters formal training and 2 semesters appropriate experiential training

Entry qualification: A pass in the Pre-Technician Course or equivalent

Selection: Admission subject to selection
Fees: R1960 per semester or R505 per subject

Venue: Technikon Pretoria; Technikon

Pretoria (Nelspruit Campus); Technikon Pretoria (Witbank Campus)

Afrikaans and English medium

National Diploma: Mechanical Engineering

Fields: General; Aviation Engineering; Automotive Engineering

Duration: 3 years full-time: 2 years formal training and 1 year appropriate experiential training

Entry qualification: Senior Certificate without university admission with a maximum of two LG subjects. LG subjects are acceptable only if not required in the programme of study

Subjects required: Mathematics and Physical Science HG 40% or Mathematics SG 60% plus Physical Science SG 50%

Selection: Admission subject to selection
Fees: First and second period of experiential training: R100 each; first formal period: R254 - R470 per subject; second period: R398 - R422 per subject; third period: R406 - R452 per subject; fourth period: R386 - R406 per subject

Venue: Technikon SA
English or Afrikaans medium
National Diploma: Mechanical Engineering
Correspondence course
Duration: 3 years (experiential training included)
Entry qualification: Senior Certificate without university admission with a maximum of 2 subjects on LG (official languages excluded) or a N3 Certificate with 4 subjects (minimum 50%)
Subjects required: Mathematics and Physical Science HG or SG for Senior Certificate. Mathematics N3 and Engineering Science N3 plus two languages HG or SG for the N3 Certificate
Additional requirements: Candidates must be employed in a field related to engineering
Fees: R430 per subject

Venue: Transkei Technikon
English medium
National Diploma: Mechanical Engineering
Duration: 3 years full-time (one semester experiential training included)
Entry qualification: Senior Certificate without university admission
Selection: Admission subject to selection
Fees: R3950 p.a.

METALLIFEROUS MINING

Occupation(s): Mining technician
Personal requirements: Healthy, physically fit and prepared to work underground
Nature of work: Involved in the running of the production section of a mine and responsible for aspects such as equipment, air conditioning, transport and processing of ore, explosives, etc.

Venue: Technikon Witwatersrand
Afrikaans or English medium
National Diploma: Metalliferous Mining
Duration: 3 years
Entry qualification: Senior Certificate without university admission

Subjects required: Mathematics HG (E symbol) or SG (D symbol)
Subjects recommended: Physical Science
Additional requirements: Physical fitness 'Red Ticket' from the Medical Bureau will be required for employment in the mining industry
Selection: Merit and personal interviews
Note: Prospective students can approach the industry for temporary employment during their studies to enable them to get the necessary experiential training. A Pre-Technician's programme is available for people who do not comply with the minimum entrance requirements
Fees: Approximately R480 per subject

Venue: Technikon SA
Afrikaans or English medium
National Diploma: Metalliferous Mining
Correspondence course;
Duration: 3 years
Entry qualification: Senior Certificate without university admission (maximum of 2 LG subjects, excluding official languages)
Subjects required: Mathematics
Subjects recommended: Chemistry and Physics
Additional requirements: Student must be employed on a mine or in a mining related career
Fees: R430 per subject

METALLURGICAL ENGINEERING

Occupation(s): Metallurgical engineering technician
Personal requirements: An interest in applying scientific skills to solve problems
Nature of work: Does research regarding new processes to produce better metals, assists in supervising the production processes and discusses technical matters with customers

Venue: Port Elizabeth Technikon
Afrikaans and English medium

National Diploma: Metallurgical Engineering

Duration: 3 years full-time: 18 months formal training and 18 months experiential training

Entry qualification: Senior Certificate without university admission (HG or SG subjects only) or N3 Certificate with two languages at Senior Certificate level

Subjects required: First Language, Mathematics and Physical Science HG (E symbol) or SG (D symbol) for Senior Certificate. A minimum of 50% for Mathematics and Applied Science for the N3 Certificate

Selection: Academic achievement

Fees: R190 - R530 per subject

Venue: Technikon Witwatersrand

Afrikaans or English medium

National Diploma: Metallurgical Engineering

Duration: 3 years

Entry qualification: Senior Certificate without university admission

Subjects required: Mathematics and Physical Science HG (D symbol) or SG (C symbol)

Additional requirements: A physical fitness 'Red Ticket' from the Medical Bureau for employment in the mining industry

Selection: Merit and personal interviews

Note: Prospective students can approach the industry for temporary employment during their studies to enable them to get the necessary experiential training. A Pre-Technician's programme is available for people who do not comply with the minimum admission requirements

Fees: Approximately R380 per subject per semester

Venue: Vaal Triangle Technikon

Afrikaans and English medium

National Diploma: Metallurgical Engineering

Fields: Physical Metallurgy; Extraction Metallurgy

Duration: 3 years (experiential training included)

Entry qualification: Senior Certificate without university admission with at least 4 subjects on HG or SG or on N3 level

Subjects required: Senior Certificate: Mathematics, Physical Science and both official languages HG or SG. N3: Mathematics and Engineering Science at least 50% and English and Afrikaans at N3 level. Another language may be offered as an alternative to Afrikaans or English

Selection: Point rating system and possible placement test

Fees: First semester: R2617; second semester: R2313; third semester: R2088

Venue: Technikon Pretoria

Afrikaans and English medium

National Diploma: Metallurgical Engineering

Duration: 3 years full-time: 18 months formal training and 18 months appropriate in-service training

Entry qualification: Senior Certificate without university admission with a maximum of two LG subjects. LG subjects are acceptable only if not required in the programme of study

Subjects required: Mathematics and Physical Science

Subjects recommended: Another natural science subject

Selection: Admission is subject to selection

Fees: First semester R412 - R544 per subject; second semester: R224 - R564 per subject; third semester: R474 - R728 per subject

METEOROLOGY

Occupation(s): Meteorology technician

Personal requirements: Attentiveness, accuracy and ability to work independently

Nature of work: Supplier of weather forecasts to the media, shipping, aviation, etc.. Collects and compiles information by observing temperature, atmospheric pressure, clouds, visibility etc. and sees to the maintenance of the weather equipment

Venue: Technikon Pretoria
Afrikaans and English medium
National Diploma: Meteorology
Duration: 3 years full-time: 2 years formal training and 1 year appropriate experiential training
Entry qualification: Senior Certificate without university admission with a maximum of two LG subjects. LG subjects are acceptable only if not required in the programme of study
Subjects required: Mathematics and Physical Science HG 40% or SG 50%
Additional requirements: Must be employed by the Department of Environmental Affairs, the TBVC countries or Namibia
Selection: Admission subject to selection
Fees: First formal period: R254 - R480 per subject; second period: R370 - R422 per subject; third period: R190 - R642 per subject; fourth period: R190 - R850 per subject; fifth period (for practice): R370; sixth period (for practice): R380

MINE SURVEYING

Occupation(s): Mine surveying technician
Personal requirements: Physically fit, enjoys practical and physical activities, good communication skills and ability to work under pressure
Nature of work: Plans the direction and extent of underground activities while using advanced surveying techniques and equipment

Venue: Technikon Witwatersrand
Afrikaans or English medium
National Diploma: Mine Surveying
Duration: 3 years
Entry qualification: Senior Certificate without university admission
Subjects required: Mathematics HG (D symbol) or SG (C symbol)
Subjects recommended: Technical Drawing and Physical Science
Additional requirements: Physical fitness 'Red Ticket' from the Medical Bureau for employment in the mining industry
Selection: Merit and personal interviews

Note: A Pre-Technicians Course is available for candidates who do not comply with the minimum entrance requirements. Prospective students can approach the industry for temporary employment during their studies to enable them to get the necessary experiential training
Fees: Approximately R480 per subject

Venue: Technikon SA
Afrikaans or English medium
National Diploma: Mine Surveying
Correspondence course;
Duration: 3 years
Entry qualification: Senior Certificate without university admission (maximum of two LG subjects, official languages excluded)
Subjects required: Mathematics
Additional requirements: Student must be employed on a mine or in a mining-related career
Fees: R430 per subject

NON-DESTRUCTIVE TESTING

Occupation(s): Technician (Non-destructive Testing)
Personal requirements: Responsibility, perseverance and ability to work independently
Nature of work: Conducts tests on manufactured products to ascertain whether defects are within the specifications and that the products are suitable for use

Venue: Vaal Triangle Technikon
Afrikaans and English medium
National Diploma: Non-destructive Testing
Duration: 3 years
Entry qualification: Senior Certificate without university admission with at least 4 subjects at HG or SG
Subjects required: Both official languages at HG or SG. Mathematics and Physical Science HG (E symbol) or SG (D symbol)
Selection: Point rating system and possible placement test
Fees: First semester: R2215; second se-

mester: R2088; third semester: R2050

NON-DIRECTED PROGRAMMES

Venue: Technikon SA

Afrikaans and English medium

Certificate Programme

Correspondence course

Fields: Accounting; Business Studies; Botany; Company Administration; Government Finance; Horticulture; Horticulture Management; Horticulture: Mechanisation; Horticultural Practices; Industrial Relations; Internal Auditing; Landscape Design; Local Government Finance; Marketing; Method & Time Measurement; Municipal Administration; Packaging Management; Personnel Management; Public Management and Administration; Purchasing Management; Plant Breeding; Plant Pest Control; Printing Management; Production Management; Real Estate; Registration of Deeds; Retail Business Management; Safety Management; State Accounts & Finance; Inland Revenue; Tax and Law; Turfgrass Management; Urban Environmental Management; Work Study: Factories; Work Study: Offices; Work Study: Civil Services;

Duration: 1 year

Entry qualification: Senior Certificate without university admission with not more than two subjects on the LG, which may not include English or Afrikaans

Note: Certificate programmes are intended for NEW students only and not for existing diploma students. Each certificate relates to a particular diploma or group of diplomas. It acts as an access path to a national diploma with full subject credits. Students who are not certain as to which direction to study, may choose subjects from different diplomas and after self-evaluation of their progress, make a choice, retaining credit for appropriate subjects passed

Fees: R390 per subject

Venue: Technikon SA

Afrikaans and English medium
Higher Certificate Programme

Correspondence course

Fields: Horticulture; Local Government Finance; Municipal Administration; Public Management and Administration

Entry qualification: Senior Certificate without university admission with not more than two subjects on the LG, which may not include English or Afrikaans

Note: Certificate programmes are intended for NEW students only and not for existing diploma students. Each certificate relates to a particular diploma or group of diplomas. It acts as an access path to a national diploma with full subject credits. Students who are not certain as to which direction to study, may choose subjects from different diplomas and after self-evaluation of their progress, make a choice, retaining credit for appropriate subjects passed

Fees: R390 per subject

SURFACE MINING

Occupation(s): Mining technician

Personal requirements: Physically fit, adaptable to changing situations, responsible and co-operative

Nature of work: Investigates mineral deposits in co-operation with geologists and takes responsibility for aspects such as mining equipment, explosives, transport and processing of ore, etc.

Venue: Technikon SA

Afrikaans or English medium

National Diploma: Surface Mining

Correspondence course;

Duration: 3 years. Proof has to be produced that student has been employed for a period of at least three years in a mining or related practice

Entry qualification: Senior Certificate without university admission with a maximum of two subjects on LG (the two subjects on LG must exclude the official languages)

Subjects required: Mathematics

Subjects recommended: Chemistry and

Physics

Additional requirements: Student must be employed by a mining company or in a mining-related career

Fees: R430 per subject

SURVEYING

Occupation(s): Surveying technician

Personal requirements: Enjoys travelling and working outdoors, responsible and good human relations

Nature of work: Mapping and collection of all necessary data on the nature of the land on which a planned scheme is to be executed. Geodetic surveying involves accuracy, used to establish the shape of the planet earth; with cadastral surveying property boundaries are determined; hydrographic surveying is used to map the sea bed; mine surveying involves underground workings; topographical surveying involves the physical features on the ground and engineering surveying involves the setting out and maintenance of all buildings

Venue: Mangosuthu Technikon

English medium

National Diploma: Surveying

Duration: 4 semesters formal training and 2 semesters appropriate experiential training

Entry qualification: Senior Certificate without university admission

Subjects required: English, Mathematics and a natural science subject

Selection: Academic merit

Fees: R1960 per semester

Venue: Technikon Witwatersrand

English medium

National Diploma: Surveying

Duration: 3 years

Entry qualification: Senior Certificate without university admission

Subjects required: Physical Science and the First Language (HG: D symbol in one and HG: E symbol in the other), Second Language SG (D symbol) and Mathematics

HG (D symbol)

Subjects recommended: Computer Science and Geography

Selection: Selection test and a personal interview if required

Fees: 6 subjects @ approximately R760 each p.a. or R380 each per semester

Venue: Technikon Pretoria

Afrikaans or English medium

National Diploma: Surveying

Duration: Four semesters formal training and two semesters experiential training

Entry qualification: Senior Certificate without university admission (with a maximum of two LG subjects and which are acceptable only if not required in the programme of study)

Subjects required: Mathematics and Physical Science HG (E symbol) or SG (C symbol)

Selection: Academic achievement and applicable subjects

Note: It is compulsory for students to register with the SA Council for Professional Surveyors and Technical Surveyors as technician-in-training

Fees: R224 - R506 per subject per semester

Venue: M.L. Sultan Technikon

English medium

National Diploma: Surveying

Duration: 4 semesters full-time and 2 semesters in-service training

Entry qualification: Senior Certificate without university admission and with subjects on HG and/or SG

Subjects required: English (First Language), Afrikaans or another language and Mathematics

Subjects recommended: Physical Science or Physics and/or Technical Drawing

Selection: Academic merit

Fees: R3720 per annum or R1860 per semester

Venue: Technikon Natal

Afrikaans or English medium
National Diploma: Surveying
Duration: 3 years: 2 years' formal training and 1 year's experiential training
Entry qualification: Senior Certificate without university admission with a minimum of 4 subjects on HG and/or SG, official languages included. Subjects on LG are acceptable only if not required in the programme of study or a N3 Certificate with 4 subjects plus the two official languages
Subjects required: English First Language HG (E symbol) or SG (D symbol) or English Second Language HG (C symbol) or SG (B symbol) and Mathematics HG (E symbol) or SG (D symbol)
Selection: Academic point rating
Fees: R2630 per semester or R610 per subject

Venue: Technikon Northern Transvaal
English medium
National Diploma: Surveying
Duration: 6 semesters: 4 semesters full-time study at Technikon and 2 semesters of experiential training with an approved employer
Entry qualification: Senior Certificate without university admission (C aggregate) or N4 with at least 5 appropriate subjects or successful completion of the Potentiality Development Programme
Subjects required: Senior Certificate: Mathematics (C symbol), Physical Science and English. N4: Mathematics (60%) and English
Selection: Aptitude tests
Note: A Potentiality Development Programme is available for students who do not meet the selection criteria in terms of school symbols. A Senior Certificate without university admission with a HG pass or an E symbol in Mathematics and Physical Science and a pass in English, is required for admission to this programme. 1993 information
Fees: 1994: R360 per subject per semester

Venue: Cape Technikon
Afrikaans or English medium
National Diploma: Surveying
Duration: 3 years full-time: 18 months formal training and 18 months appropriate in-service training
Entry qualification: Senior Certificate without university admission (six subjects at HG and/or SG)
Subjects required: First Language HG and Second Language SG; Mathematics SG (D symbol) or HG (E symbol) or N4 Mathematics at least 50% (Functional Mathematics is unacceptable)
Selection: Psychometric testing and/or aptitude tests and/or a personal interview
Fees: Approximately R3000 - R6000 p.a.

Venue: Peninsula Technikon
Afrikaans or English medium
National Diploma: Surveying
Duration: 3 years: 2 years formal training and one year experiential training with an approved civil engineering consultant, contractor or land surveyor. Land Surveying: 1 year formal training and 1 year experiential training. The third year will be offered as the need arises
Entry qualification: Senior Certificate without university admission or N3
Subjects required: Mathematics for Senior Certificate. One language (this need not be Afrikaans or English) as First Language SG and one official language as Second Language SG for N3 candidates
Fees: Approximately R161 per subject p.a.

TELECOMS

Venue: Technikon SA
Afrikaans and English medium
National Diploma: Telecoms
Correspondence course
Duration: Only subjects (Mathematics I, II and III) from the National Diploma: Telecoms are offered. It is not a full diploma course
Entry qualification: Senior Certificate without university admission with a maximum of two subjects on LG (the two

subjects on LG must exclude the official languages)

Fees: R390 per subject

TOWN AND REGIONAL PLANNING

Occupation(s): Town and regional planning technician

Personal requirements: Creative, three-dimensional ability, good visual perception and the ability to communicate effectively

Nature of work: Works as one of a team (made up of engineers, architects, geologists, surveyors, economists, landscape architects and social scientists) in the development and planning of residence, work places and recreational facilities. Work embraces inter alia land surveying, planning, presentation of data by means of maps, graphs, diagrams, sketches and the construction of scale models for proposed schemes

Venue: Cape Technikon

Afrikaans or English medium

National Diploma: Town and Regional Planning

Duration: 3 years full-time: 18 months formal training and 18 months appropriate in-service training

Entry qualification: Senior Certificate without university admission (six subjects at HG and/or SG)

Subjects required: First Language HG and Second Language SG; Mathematics SG (D symbol) or HG (E symbol) or N3 Mathematics (70%) or N4 Mathematics (60%)

Selection: Psychometric testing and/or aptitude tests and/or a personal interview

Fees: Approximately R3000 - R6000 p.a.

Venue: M.L. Sultan Technikon

English medium

National Diploma: Town and Regional Planning

Duration: 3 years full-time: 2 years'

formal training (years one and three) and one year's appropriate in-service training (year two)

Entry qualification: Senior Certificate without university admission and with HG or SG subjects

Subjects required: Mathematics HG; English (First Language) and Afrikaans or another language

Subjects recommended: Physical Science
Fees: R3720 per annum or R1860 per semester

Venue: Technikon Witwatersrand

Afrikaans or English medium

National Diploma: Town and Regional Planning

Duration: 3 years

Entry qualification: Senior Certificate without university admission or a N3 Certificate

Subjects required: First Language HG (E symbol), Second Language SG (D symbol) and Mathematics HG (E symbol) or SG (D symbol) for Senior Certificate. For the N3 Certificate an average of 60% with a minimum of 55% for Mathematics, Trade Theory, Building Science and Architectural Draughting, as well as the First Language HG (E symbol) and Second Language SG (D symbol)

Subjects recommended: Geography

Selection: Selection test

Fees: 6 subjects @ approximately R760 each p.a. or R380 each per semester

WOOD PRODUCTION ENGINEERING

Occupation(s): Wood production engineering technician

Personal requirements: Scientifically inclined, interested in technology and ability to work with people

Nature of work: Assists in the processing of wood and in the production of various wood products

Venue: Port Elizabeth Technikon

Afrikaans and English medium
National Diploma: Wood Production Engineering

Duration: 6 semesters: 4 academic semesters at Saasveld and 2 experiential or practical semesters

Entry qualification: Senior Certificate without university admission (LG subjects are unacceptable)

Subjects required: First Language HG (E symbol) or SG (D symbol - or E symbol if it is a converted HG point)

Subjects recommended: Knowledge of an African language, Mathematics and Physical Science

Additional requirements: Completed national service is desirable and physical health and fitness

Selection: Scholastic achievement and an aptitude test

Fees: R390 per subject

INDEX OF OCCUPATIONS

	<i>PAGE</i>
Aeronautical engineer	2
Agricultural engineer	2
Cartographer	6
Chemical engineer	2
Chemical engineering technician	6
Civil engineer	2
Civil engineering technician	8
Civil engineering technician (Agriculture)	10
Computer systems technician	12
Deck officer	19
Electrical engineer	2
Electrical engineering technician	13
Electronics engineer	2
Geotechnician (Economic)	13
Industrial engineer	2
Industrial engineering technician	17
Land surveyor	4
Materials engineer	2
Mechanical engineer	2
Mechanical engineering technician	19
Metallurgical engineer	2
Metallurgical engineering technician	17, 22
Meteorologist	4
Meteorology technician	23
Mine surveying technician	24
Mining engineer	2
Mining technician	11, 22, 25
Surveying technician	26
Technician (Non-destructive Testing)	24
Town and regional planner	4
Town and regional planning technician	28
Wood production engineering technician	28

**STUDIEGELEENTHEDE
AAN UNIVERSITEITE EN TECHNIKONS**

INDEKS VAN STUDIERIGTINGS WAARVOOR STUDIEGELEENTHEDE BESKIKBAAR IS

BLADSY

UNIVERSITEITE

INGENIEURSWESE	32
LANDMEETKUNDE	34
STADS- EN STREEKBEPLANNING	34
WEERKUNDE	35

TECHNIKONS

BEDRYFSINGENIEURSWESE	36
BOORPRAKTYK	37
CHEMIESE INGENIEURSWESE	37
EKONOMIESE GEOLOGIE	39
EKSTRAKSIEMETALLURGIE	39
ELEKTRIESE INGENIEURSWESE	39
HOUTPRODUKSIE-INGENIEURSWESE	43
KARTOGRAFIE	43
MARITIEME STUDIES	44
MEGANIESE INGENIEURSWESE	44
METAALMYNBOU	47
METALLURGIESE INGENIEURSWESE	47
MYNOPMETING	48
NIE-VERNIETIGENDE TOETSING	50
OPMETING	50
OPPERVLAKMYNBOU	52
SIVIELE INGENIEURSWESE	52
SIVIELE INGENIEURSWESE: LANDBOU	55
STADS- EN STREEKBEPLANNING	55
STEENKOOLMYNBOU	56
TELEKOM	57
WEERKUNDE	57
NIE-GERIGTE PROGRAMME	49
OORBRUGGINGSKURSUSSE	50

**STUDIEGELEENTHEDE AAN
UNIVERSITEITE**

INGENIEURSWESE

Beroep(e): Bedryfsingenieur; Chemiese ingenieur; Elektriese ingenieur; Elektroniese ingenieur; Landbou-ingenieur; Lugvaartingenieur; Materiale ingenieur; Meganiese ingenieur; Metallurgiese ingenieur; Mynbou-ingenieur; Siviële ingenieur

Waar: Universiteit van Durban-Westville
Engelsmedium

B.Sc.(Eng.)

Rigtings: Chemiese Ingenieurswese; Siviële Ingenieurswese; Elektriese Ingenieurswese; Meganiese Ingenieurswese

Duur: 4 jaar

Toetreekwalifikasie: Senior Sertifikaat met universiteitstoelating

Vakke vereis: Wiskunde HG 50%

Keuring: Akademiese prestasie

Nota: Om studente met 'n akademiese agterstand te help om die gaping tussen matriek en die eerste jaar van Ingenieurswese te oorbrug, word 'n Oorbruggingskursus aangebied. Die keuring hiervoor bestaan uit 'n toelatingstoets en 'n onderhoud

Gelde: Ongeveer R5000 p.j.

Waar: Universiteit van Port Elizabeth

Afrikaans- en Engelsmedium

B.Sc. (Ingenieurswese)

Duur: SLEGS die eerstejaarskursus vir hierdie graad word aangebied. 'n Kandidaat wat die eerstejaarskursus suksesvol voltooi het, kan dan sy studies by 'n ander Suid-Afrikaanse universiteit voortsit

Toetreekwalifikasie: Senior Sertifikaat met universiteitstoelating

Vakke vereis: Wiskunde SG. Wiskunde HG (E-simbool) of SG (D-simbool) word vir kursusse in Wiskunde, Toegepaste Wiskunde, Statistiek, Ekonomie, Rekenaarwetenskap en Rekeningkunde vereis. Vir toelating tot Ekonomiese Statistiek word Wiskunde SG vereis en vir toelating tot Wiskunde Spesiaal word Wiskunde SG (E-simbool) vereis

Gelde: Eerste jaar: R5640

Waar: PU (vir CHO)

Afrikaansmedium

B.Ing.

Rigtings: Chemiese Ingenieurswese; Elektriese en Elektroniese Ingenieurswese; Meganiese Ingenieurswese; Metallurgiese Ingenieurswese

Duur: 4 jaar

Toetreekwalifikasie: Senior Sertifikaat met universiteitstoelating

Vakke vereis: Afrikaans Eerste Taal HG (E-simbool) of Tweede Taal HG (C-simbool)

Indien kandidaat nie aan taalvereistes voldoen nie, moet 'n kursus in Kommunikasie-Afrikaans gedurende die eerste jaar geslaag word. Wiskunde en Natuur- en Skeikunde HG 50% of technikonstudente met Wiskunde T2 60% en/of Chemie en Fisika T2 50%

Keuring: Keuring mag vereis word

Gelde: Ongeveer R6580 p.j.

Waar: Universiteit van Kaapstad

Engelsmedium

B.Sc. (Eng.)

Rigtings: Chemiese Ingenieurswese; Siviële Ingenieurswese; Elektriese Ingenieurswese; Materiale Ingenieurswese; Meganiese Ingenieurswese; Opmeting en Aardmeetkundige Ingenieurswese; Elektro-Meganiese Ingenieurswese

Duur: 4 jaar

Toetreekwalifikasie: Senior Sertifikaat met universiteitstoelating

Vakke vereis: Wiskunde en Natuur- en Skeikunde HG (D-simbool)

Bykomende vereistes: Engelse taalvaardigheid

Keuring: Akademiese prestasie

Nota: 'n Akademiese ondersteuningsprogram word aangebied vir studente wat nie voldoende voorbereid is vir tersiêre studie nie. D.m.v. die program word die eerste twee jaar van die gewone ingenieurskursus oor drie jaar versprei

Gelde: Eerste jaar: R7000; daarna: R7650 p.j.

Waar: Randse Afrikaanse Universiteit

Afrikaansmedium

B.Ing.

Rigtings: Elektriese en Elektroniese Ingenieurswese; Meganiese Ingenieurswese; Siviele Ingenieurswese

Duur: 4 jaar (goedgekeurde praktiese werk word vereis)

Toetreekwalifikasie: Senior Sertifikaat met universiteitstoelating

Vakke vereis: Die kandidaat moet aan sekere minimum vereistes (M-telling) voldoen asook Afrikaans Eerste Taal HG (D-simbool) of Afrikaans Tweede Taal HG (C-simbool) of Afrikaans SG (C-simbool)

Keuring: Diagnostiese toetse en akademiese prestasie

Gelde: Ongeveer R5000 - R6000 p.j.

Waar: Universiteit van die Witwatersrand
Engelsmedium

B.Sc. (Eng.)

Rigtings: Lugvaartingenieurswese; Chemiese Ingenieurswese; Siviele Ingenieurswese; Metallurgie en Materiale Ingenieurswese; Elektriese Ingenieurswese; Bedryfsingenieurswese; Meganiese Ingenieurswese; Mynbou-ingenieurswese; Minerale hulpbronnebestuur

Duur: 4 jaar voltyds (praktiese opleiding en vakansiewerk word vereis)

Toetreekwalifikasie: Senior Sertifikaat met universiteitstoelating

Vakke vereis: Wiskunde en Natuur- en Skeikunde HG. 'n Slaagpunt in Engels Eerste of Tweede Taal HG of 'n slaagpunt in die Universiteit se Engelse Taalvaardigheidstoets

Keuring: Akademiese prestasie

Gelde: Ongeveer R6300 p.j.

Waar: Universiteit van Natal(Durban);
Universiteit van Natal(Pietermaritzburg)
Engelsmedium

B.Sc. (Eng.)

Rigtings: Landbou-ingenieurswese; Siviele Ingenieurswese; Elektriese Ingenieurswese; Elektroniese Ingenieurswese; Meganiese Ingenieurswese; Chemiese Ingenieurswese

Duur: 4 jaar (vakansiewerk word ook

vereis)

Toetreekwalifikasie: Senior Sertifikaat met universiteitstoelating

Vakke vereis: Wiskunde HG 60% en Natuur- en Skeikunde (of Chemie of Fisika) 60%

Keuring: Akademiese prestasie

Nota: Die eerste studiejaar mag by enige van die twee kampusse gedoen word. Van die tweede jaar af slegs by Durban, behalwe Landbou-ingenieurswese wat tydens die finale jaar by Pietermaritzburg gedoen word

Gelde: 1993: Ongeveer R8130 p.j.. 'n Verhoging van ongeveer 10% vir 1994

Waar: Universiteit van Stellenbosch

Afrikaansmedium

B.Ing.

Rigtings: Bedryfsingenieurswese; Chemiese Ingenieurswese; Elektriese en

Elektroniese Ingenieurswese; Meganiese Ingenieurswese; Siviele Ingenieurswese

Duur: 4 jaar

Toetreekwalifikasie: Senior Sertifikaat met universiteitstoelating (D-simbool gemiddeld)

Vakke vereis: Wiskunde HG (D-simbool) en Natuur- en Skeikunde HG (E-simbool) of SG (C-simbool). Afrikaans HG en Engels

Vakke aanbeveel: 'n Moderne Europese taal of 'n Afrika taal

Keuring: Skolastiese prestasie; akademiese vermoëns; aanleg en belangstelling; leierskappe; deelname aan buitemuurse aktiwiteite

Gelde: R5800 p.j.

Waar: Universiteit van Pretoria

Afrikaansmedium

B.Ing.

Rigtings: Bedryfsingenieurswese; Chemiese Ingenieurswese; Elektriese Ingenieurswese; Elektroniese Ingenieurswese; Landbou-ingenieurswese; Meganiese Ingenieurswese; Metallurgiese Ingenieurswese; Mynbou-ingenieurswese; Siviele Ingenieurswese

Duur: 4 jaar voltyds of 5 jaar indien die eerste studiejaar oor 2 jaar na-uurse studie versprei word

Toetreekwalifikasie: Senior Sertifikaat met universiteitstoelating

Vakke vereis: Natuur- en Skeikunde HG 50% (afhangende van die rigting wat gevolg word) en Wiskunde HG 50%

Bykomende vereistes: 'n Gesondheidsertifikaat van die Mediese Buro vir Bedryfsiektes vir toelating tot Mynbou-ingenieurswese

Keuring: Akademiese prestasie

Gelde: Bedryfs- en Mynbou-ing.: R7325 p.j.; Elektroniese Ing.: R6940 p.j.; Chemiese Ing.: R6985 p.j.; Landbou-ing.: R7455 p.j.; Meganiese Ing.: R7335 p.j.; Metallurgiese Ing.: R7005 p.j.; Siviele Ing.: R7020 p.j.

LANDMEETKUNDE

Beroep(e): Landmeter

Waar: Universiteit van Pretoria
Afrikaansmedium

B.Landmeetkunde

Duur: 4 jaar en 6 maande

Toetreekwalifikasie: Senior Sertifikaat met universiteitstoelating

Vakke vereis: Wiskunde en Natuur- en Skeikunde HG 50%

Keuring: Gemiddelde persentasie behaal in St. 9

Waar: Universiteit van Kaapstad

Engelsmedium

B.Sc. (Survey.)

Duur: 4 jaar

Toetreekwalifikasie: Senior Sertifikaat met universiteitstoelating

Vakke vereis: D-simbool in beide Wiskunde en Natuur- en Skeikunde op die HG
Bykomende vereistes: Engelse taalvaardigheid

Keuring: Akademiese prestasie

Gelde: Eerste jaar: R7000 en daaropvolgende jare: R7650 p.j.

Waar: Universiteit van Natal(Durban)
Engelsmedium

B.Sc. (Land Surveying)

Duur: 4 jaar (vakansiewerk word ook vereis)

Toetreekwalifikasie: Senior Sertifikaat met universiteitstoelating

Vakke vereis: Wiskunde en Natuur- en Skeikunde of Chemie of Fisika HG (60%)

Keuring: Akademiese prestasie

Gelde: R8130 p.j. vir 1993 en 'n styging van ten minste 10% vir 1994

STADS- EN STREEKBEPLANNING

Beroep(e): Stads- en streekbeplanner

Waar: Universiteit van Pretoria
Afrikaansmedium

B.Stads- en Streekbeplanning

Duur: 4 jaar voltyds of 3 jaar deelyds

Toetreekwalifikasie: Senior Sertifikaat met universiteitstoelating

Vakke vereis: Wiskunde HG 40% of SG 50%

Keuring: Matriekprestasie

Gelde: R5175 p.j.

Waar: PU (vir CHO)

Afrikaansmedium

B.Art. et Scien. (Beplanning)

Duur: 4 jaar voltyds

Toetreekwalifikasie: Senior Sertifikaat met universiteitstoelating

Vakke vereis: Wiskunde HG 40% of SG 60%; Afrikaans HG Eerste Taal (E-simbool) of Tweede Taal (C-simbool), andersins moet 'n kursus in Kommunikasie-Afrikaans geslaag word

Keuring: Akademiese prestasie en psigometriese toetsing

Gelde: Ongeveer R4795 p.j.

Waar: Universiteit van die Witwatersrand
Engelsmedium

B.Sc. (Town and Regional Planning)

Duur: 4 jaar voltyds

Toetreekwalifikasie: Senior Sertifikaat met universiteitstoelating
Vakke vereis: Engels HG (of 'n slaagpunt in die Universiteit se Engelse Taalvaardigheidstoets) en Wiskunde HG 40% of SG 60%
Keuring: Akademiese prestasie
Gelde: Ongeveer R6300 p.j.

WEERKUNDE

Beroep(e): Weerkundige

Waar: Universiteit van Pretoria
Afrikaansmedium
B.Sc. (Weerkunde)
Duur: 4 jaar
Toetreekwalifikasie: Senior Sertifikaat met universiteitstoelating
Vakke vereis: Wiskunde en Natuur- en Skeikunde HG 50%
Keuring: Gemiddelde persentasie behaal in St. 9

**STUDIEGELEENTHEDE AAN
TECHNIKONS**

BEDRYFSINGENIEURSWESE

Gelde: R3720 p.j.

Beroep(e): Bedryfsingenieurstechnikus

Persoonlike vereistes: 'n Wetenskaplike benadering, objektief, vermoë om werk met fyn besonderhede te lewer en om goeie menseverhoudinge te handhaaf

Aard van werk: Identifiseer probleme, beveel verbeterings aan en implementeer dit in die werksituasie. Skep 'n gunstige werksomgewing wat aan die fisiese en psigologiese behoeftes van die werknemers voldoen

Waar: Port Elizabethse Technikon
Afrikaans- en Engelsmedium

Nasionale Diploma: Bedryfsingenieurswese

Duur: 3 jaar voltyds; 2 jaar formele opleiding en 1 jaar toepaslike ervaringsopleiding

Toetreekwalikasie: Senior Sertifikaat sonder universiteitstoelating (slegs HG- of SG-vakke) of die N3-Sertifikaat met twee tale op Senior Sertifikaat-vlak

Vakke vereis: Eerste Taal, Wiskunde en Natuur- en Skeikunde HG (E-simbool) of SG (D-simbool) vir Senior Sertifikaat. Minstens 50% vir Wiskunde en Toegepaste Wetenskap vir die N3-Sertifikaat

Keuring: Akademiese prestasie

Gelde: R140 - R380 per vak

Waar: M.L. Sultan Technikon
Engelsmedium

Nasionale Diploma: Bedryfsingenieurswese

Duur: 3 jaar voltyds; 2 jaar formele opleiding en 1 jaar ervaringsopleiding

Toetreekwalikasie: Senior Sertifikaat sonder universiteitstoelating (slegs HG- of SG-vakke) of N3

Vakke vereis: Wiskunde HG en 'n slaagpunt in Natuur- en Skeikunde en Engels Eerste Taal (of 'n ander taal) vir Senior Sertifikaat of 'n slaagpunt in Wiskunde, Toegepaste Wetenskap, Afrikaans en Engels (of 'n ander taal) vir die N3-Sertifikaat

Keuring: Academic achievement

Waar: Technikon Pretoria
Afrikaans- of Engelsmedium

Nasionale Diploma: Bedryfsingenieurswese

Duur: 3 jaar voltyds; 2 jaar formele opleiding en 1 jaar toepaslike indiensopleiding

Toetreekwalikasie: Senior Sertifikaat sonder universiteitstoelating met 'n maksimum van twee LG-vakke. Vakke op LG is slegs aanvaarbaar indien dit nie in die onderrigprogram vereis word nie

Vakke vereis: Wiskunde HG 40% of SG 50%

Keuring: Toelating aan keuring onderworpe

Gelde: Eerste semester: R254 - R412 per vak; tweede semester: R370 - R504 per vak; derde semester: R384 - R564 per vak; vierde semester: R380 - R444 per vak

Waar: Vaaldriehoekse Technikon
Afrikaans- en Engelsmedium

Nasionale Diploma: Bedryfsingenieurswese

Duur: 3 jaar (ervaringsopleiding ingesluit)

Toetreekwalikasie: Senior Sertifikaat sonder universiteitstoelating met ten minste vier vakke op HG of SG of op N3-vlak

Vakke vereis: Beide amptelike tale, Wiskunde en Natuur- en Skeikunde HG of SG.

Vir die N3 Sertifikaat moet Wiskunde en Ingenieurswetenskap met minstens 50% geslaag word. 'n Ander taal mag as alternatief vir Afrikaans of Engels aangebied word

Keuring: Puntestelsel en moontlike toelatingstoets

Gelde: Eerste semester: R2128; tweede semester: R2088; derde semester: R1753; vierde semester: R2088

Waar: Technikon Witwatersrand
Afrikaans- of Engelsmedium

Nasionale Diploma: Bedryfsingenieurswese

Duur: 3 jaar voltyds

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating
Vakke vereis: Natuur- en Skeikunde, Wiskunde en een amptelike taal HG (E-simbool) of SG (D-simbool)
Vakke aanbeveel: Tegniese Tekene HG (E-simbool) of SG (D-simbool)
Keuring: Keuring word verleng
Gelde: Ongeveer R380 per vak per semester

Waar: Kaapse Technikon
Afrikaans- of Engelsmedium
Nasionale Diploma: Bedryfsingenieurswese
Duur: 3 jaar voltyds: 2 jaar formele opleiding en 1 jaar toepaslike indiensopleiding
Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met ses vakke op HG of SG en 'n D-simbool gemiddeld of die N4-Sertifikaat
Vakke vereis: Eerste Taal HG en Tweede Taal SG. Wiskunde en Natuur- en Skeikunde HG (E-simbool) of SG (D-simbool) vir Senior Sertifikaat of minstens 60% vir N4. Funksionele Wiskunde is nie aanvaarbaar nie
Vakke aanbeveel: Metaalwerk
Keuring: Moontlike psigometriese of aanlegtoetse of 'n persoonlike onderhoud
Gelde: Ongeveer R3000 - R6000 p.j.

BOORPRAKTYK

Waar: Technikon SA
Afrikaans- en Engelsmedium
Nasionale Diploma: Boorpraktik
Korrespondensie-kursus;
Duur: 3 jaar
Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met 'n maksimum van twee vakke op LG (die twee amptelike tale mag nie op LG wees nie)
Vakke vereis: Wiskunde
Vakke aanbeveel: Chemie, Fisika
Bykomende vereistes: Studente moet in die boorpraktik of 'n verwante beroep werksaam wees
Gelde: R430 per vak

CHEMIESE INGENIEURSWESE

Beroep(e): Chemiese ingenieurstechnikus
Persoonlike vereistes: Tegnies, prakties, ondersoekend van aard, sistematies en analities
Aard van werk: Beheer 'n deel van 'n chemiese aanleg, lei 'n groep werkers, versamel inligting wat met chemiese prosesse verband hou, analiseer monsters, los tegniese probleme op en bestee tyd in 'n kantoor om verslae voor te berei en berekening te doen

Waar: Technikon Noord-Transvaal
Engelsmedium
Nasionale Diploma in Chemiese Ingenieurswese
Duur: 6 semesters voltyds: 4 semesters formele opleiding en 2 semesters ervaringsopleiding
Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating (C-simbool gemiddeld) OF suksesvolle voltooiing van die Potentiality Development Programme OF N4 met ten minste 5 toepaslike vakke
Vakke vereis: Senior Sertifikaat: Wiskunde (C-simbool), Natuur- en Skeikunde en Engels. N4: Wiskunde (60%) en Engels
Keuring: Aanlegtoetse
Nota: Die Potentiality Development Programme is beskikbaar vir studente wie se matrieksimbole nie aan die vereiste standaard voldoen nie. 'n Senior Sertifikaat sonder universiteitstoelating met 'n HG-slaagpunt of 'n E-simbool in Wiskunde en Natuur- en Skeikunde en 'n slaagpunt in Engels, word vir toelating tot die program vereis. 1993-inligting
Gelde: 1994: R360 per vak per semester

Waar: Technikon Natal
Afrikaans- of Engelsmedium
Nasionale Diploma in Chemiese Ingenieurswese
Duur: 1 jaar ervaringsopleiding en 2 jaar formele opleiding
Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met 'n minimum van 4 vakke op HG en/of SG, ampte-

like tale ingesluit. Vakke op LG is slegs toelaatbaar indien dit nie in die onderrig-program vereis word nie
Vakke vereis: Engels Eerste Taal HG (E-simbool) of SG (D-simbool) of Engels Tweede Taal HG (C-simbool) of SG (B-simbool). Wiskunde en Natuur- en Skeikunde, albei op HG
Gelde: R2590 per semester (R600 per vak)

Waar: Kaapse Technikon
Afrikaans- of Engelsmedium
Nasionale Diploma in Chemiese Ingenieurswese
Duur: 3 jaar voltyds: 24 maande formele opleiding en 12 maande toepaslike ervaringsopleiding
Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met ses vakke, D-simbool (slegs vakke op HG en SG is aanvaarbaar)
Vakke vereis: Wiskunde en Natuur- en Skeikunde SG (D-simbool) en Afrikaans en Engels (met die Eerste Taal op HG)
Keuring: Psigometriese toetsing, aanleg-toetse of persoonlike onderhoud
Gelde: Ongeveer R3000 - R6000 p.j.

Waar: Mangosuthu Technikon
Engelsmedium
Nasionale Diploma: Chemiese Ingenieurswese
Duur: 2 jaar formele opleiding en 1 jaar ervaringsopleiding
Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating
Vakke vereis: Wiskunde en Natuur- en Skeikunde
Keuring: Akademiese prestasie
Gelde: R1960 per semester

Waar: Vaaldriehoekse Technikon
Afrikaans- en Engelsmedium
Nasionale Diploma in Chemiese Ingenieurswese
Duur: 3 jaar voltyds
Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met ten minste

4 vakke op HG of SG (amptelike tale ingesluit)
Vakke vereis: Wiskunde en Natuur- en Skeikunde HG (E-simbool) of SG (D-simbool)
Keuring: Puntestelsel
Gelde: Eerste semester: R2120; tweede semester: R2102; derde semester: R2101; vierde semester: R250

Waar: Technikon Witwatersrand
Afrikaans- of Engelsmedium
Nasionale Diploma in Chemiese Ingenieurswese
Duur: 3 jaar voltyds
Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating
Vakke vereis: Wiskunde en Natuur- en Skeikunde HG (E-simbool) of SG (C-simbool) en 'n slaagpunt in Engels
Keuring: Keuringstoets
Gelde: Ongeveer R760 per vak p.j. of ongeveer R380 per vak per semester

Waar: Technikon Skiereiland
Afrikaans- of Engelsmedium
Nasionale Diploma in Chemiese Ingenieurswese
Duur: 3 jaar voltyds: 24 maande formele opleiding en 12 maande toepaslike ervaringsopleiding
Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating
Vakke vereis: Natuur- en Skeikunde en Wiskunde HG (E-simbool) of SG (D-simbool)
Keuring: Akademiese prestasie
Gelde: Ongeveer R161 - R393 per vak

Waar: M.L. Sultan Technikon
Engelsmedium
Nasionale Diploma in Chemiese Ingenieurswese
Duur: 3 jaar voltyds (ervaringsopleiding ingesluit)
Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met vakke op HG of SG

Vakke vereis: Wiskunde HG (E-simbool) of SG (C-simbool) en Natuur- en Skeikunde

Keuring: Akademiese prestasie

Gelde: R3720 p.j.

EKONOMIESE GEOLOGIE

Beroep(e): Geotegnikus (Ekonomies)

Persoonlike vereistes: Selfstandig, dinamies, fisies aktief, belangstelling in wetenskap en natuurgeskiedenis

Aard van werk: Moet bereid wees om onder alle omstandighede te werk, soos bv. bo- en ondergronds. Bestuur die geologie-afdeling van 'n myn en organiseer prospektee programme in die veld

Waar: Technikon Witwatersrand

Afrikaans- of Engelsmedium

Nasionale Diploma: Ekonomiese Geologie

Duur: 3 jaar voltyds (ervaringsopleiding ingesluit)

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating

Vakke vereis: Wiskunde en Natuur- en Skeikunde HG (E-simbool) of SG (D-simbool)

Bykomende vereistes: 'n 'Rooi kaart' van liggaamlike geskiktheid van die Mediese Buro word vereis

Keuring: Meriete en onderhoud

Nota: 'n Pre-tegniciprogram word aangebied vir persone wat nie aan die minimum toelatingsvereistes voldoen nie

Gelde: Ongeveer R480 per vak

EKSTRAKSIEMETALLURGIE

Beroep(e): Metallurgiese ingenieurstechnikus

Persoonlike vereistes: Wiskundige aanleg, 'n belangstelling in natuurwetenskappe, logiese denke, vermoë om probleme op te los en selfdisipline

Aard van werk: Onttrekking van metale en minerale uit die grond of erts massa op die mees ekonomiese wyse

Waar: Technikon Witwatersrand

Afrikaans- of Engelsmedium

Nasionale Diploma: Ekstraksiemetallurgie

Duur: 3 jaar voltyds (ervaringsopleiding ingesluit)

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating

Vakke vereis: Natuur- en Skeikunde en Wiskunde HG (D-simbool) of SG (C-simbool)

Bykomende vereistes: 'n 'Rooi kaart' van liggaamlike geskiktheid van die Mediese Buro word ook vereis

Keuring: Meriete en onderhoud

Nota: 'n Pre-tegniciprogram word aangebied vir persone wat nie aan die nodige toelatingsvereistes voldoen nie

Gelde: Ongeveer R480 per vak

ELEKTRIESE INGENIEURSWESE

Beroep(e): Elektriese ingenieurstechnikus

Persoonlike vereistes: 'n Belangstelling in natuurwetenskappe, goeie kleuronderskeidingsvermoë, vermoë om probleme op te los, idees in die praktyk toe te pas en onafhanklik te werk

Aard van werk: Swakstroom/Elektronika: Take behels die ontwerp en ontwikkeling van nuwe toerusting asook die inbedryfstelling en instandhouding van toerusting. Hierdie tegnisi is gemoed in rigtings soos telekommunikasie, radio en televisie, radar, rekenaar, elektroniese beheerstelsels ens. Sterkstroom: Die werksaamhede van die sterkstroomtegnikus het te doen met die opwekking en verspreiding van elektrisiteit. Hulle werk behels die ontwerp, ontwikkeling en oprigting van toerusting asook instandhouding en herstel

Waar: Technikon Natal

Afrikaans- of Engelsmedium

Nasionale Diploma: Elektriese Ingenieurswese

Rigtings: Radio Kommunikasie; Proses

Instrumentasie en Kontrole

Duur: 3 jaar voltyds; 2 jaar formele opleiding en 1 jaar ervaringsopleiding

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met 'n maksimum van vier vakke op HG en/of SG, amptelike tale ingesluit. Vakke op LG is slegs toelaatbaar indien dit nie in die onderrigprogram vereis word nie

Vakke vereis: Engels Eerste Taal HG (E-simbool) of SG (D-simbool) of Engels Tweede Taal HG (C-simbool) of SG (B-simbool) en goeie punte in Wiskunde en Natuur- en Skeikunde

Gelde: R2640 per semester (R 615 per vak)

Waar: Technikon SA
Afrikaans en Engelsmedium

Nasionale Diploma: **Elektriese Ingenieurswese: Elektronika en Elektroniese Kommunikasie**

Korrespondensie-kursus;

Duur: 3 jaar

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met 'n maksimum van twee vakke op LG (die twee amptelike tale mag nie op LG wees nie) OF N3 met minstens vier N3-vakke met 'n minimumpunt van 50%

Vakke vereis: Senior Sertifikaat: Wiskunde en Natuur- en Skeikunde HG of SG en ten minste twee tale op HG of SG. N3: Wiskunde N3 en Ingenieurswetenskap N3 en ten minste twee tale op HG of SG

Bykomende vereistes: Studente moet in 'n ingenieursverwante beroep staan

Nota: NB: Hierdie kursus sal moontlik in 1994 aangebied word, onderhewig aan goedkeuring

Gelde: R430 per vak

Waar: Technikon Witwatersrand
Afrikaans- of Engelsmedium

Nasionale Diploma: **Elektriese Ingenieurswese**

Duur: 3 jaar voltyds

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating

Vakke vereis: Eerste Taal HG (E-sim-

bool), Tweede Taal SG (D-simbool), Wiskunde en Natuur- en Skeikunde HG (E-simbool) of SG (D-simbool)

Keuring: Keuringstoets en persoonlike onderhoud

Gelde: Ongeveer R760 per vak p.j. of ongeveer R380 per vak per semester

Waar: Mangosuthu Technikon
Engelsmedium

Nasionale Diploma: **Elektriese Ingenieurswese**

Duur: 4 semesters formele opleiding en 2 semesters ervaringsopleiding

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating OF N3

Vakke vereis: Wiskunde, Natuur- en Skeikunde en Engels

Keuring: Kandidate word gekeur

Nota: Kandidate moet gewoonlyke eers die Pre-tegniese kursus voltooi om vir vlak I te registreer

Gelde: R1960 per semester

Waar: Technikon Noord-Transvaal
Engelsmedium

Nasionale Diploma: **Elektriese Ingenieurswese**

Rigtings: Elektroniese Kommunikasie; Sterkstroom; Proses Instrumentasie

Duur: 6 semesters voltyds; 4 semesters formele opleiding en 2 semesters ervaringsopleiding

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating (C-simbool gemiddeld) OF suksesvolle voltooiing van die Potentiality Development Programme

OF N4 met ten minste 5 toepaslike vakke

Vakke vereis: Senior Sertifikaat: Wiskunde (C-simbool), Natuur- en Skeikunde en Engels. N4: Wiskunde (60%) en Engels

Keuring: Aanlegtoets

Nota: Die Potentiality Development Programme is beskikbaar vir studente wie se matrieksimbole nie aan die vereiste standaard voldoen nie. 'n Senior Sertifikaat sonder universiteitstoelating met 'n HG-slaagpunt of 'n E-simbool in Wiskunde en Natuur- en Skeikunde en 'n slaagpunt in

Engels, word vir toelating tot die program vereis. 1993-inligting

Gelde: 1994: R360 per vak per semester

Waar: Kaapse Technikon

Afrikaans- of Engelsmedium

Nasionale Diploma: Elektriese Ingenieurswese

Duur: 3 jaar voltyds: 2 jaar formele opleiding en 1 jaar ervaringsopleiding

Toetreekwalifikasie: Senior Sertifikaat (met ses vakke op HG en/of SG) sonder universiteitstoelating

Vakke vereis: Afrikaans en Engels: Eerste Taal HG en Tweede Taal SG. Wiskunde en Natuur- en Skeikunde HG (E-simbool) of SG (D-simbool) OF N4-Wiskunde en 'n ander verwante ingenieursvak soos N4-Elektrotegniek, N4-Digitale Elektronika of N4-Ingenieurswetenskap met 'n kursuspunt van ten minste 60%

Keuring: Akademiese prestasie. Kandidate word ook aan keuringsprosedures soos bv. psigometriese en aanleëvaluering, taalvaardigheidstoetse, ens., onderwerp

Gelde: Ongeveer R3000 - R6000 p.j.

Waar: Technikon Pretoria; Technikon Pretoria(Kwamhlanga-kampus); Technikon Pretoria (Nelspruit-kampus); Technikon Pretoria (Witbank-kampus)

Afrikaans- of Engelsmedium

Nasionale Diploma: Elektriese Ingenieurswese

Rigtings: Digitale Tegnologie; Drywingsingenieurswese; Kliniese en Analoogingenieurswese; Prosesinstrumentasie en -Beheer; Avionika; Hoëfrekwensietegnologie

Duur: 3 jaar voltyds: 24 maande formele opleiding en 12 maande toepaslike indiensopleiding

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met 'n maksimum van twee vakke op LG. Die vakke op LG is slegs toelaatbaar indien dit nie in die onderrigprogram vereis word nie

Vakke vereis: Wiskunde en Natuur- en Skeikunde HG (E-simbool) of SG (D-

simbool). Vir die studierigting Avionika word Wiskunde en Natuur- en Skeikunde HG (D-simbool) of SG (C-simbool) vereis
Keuring: Akademiese prestasie
Gelde: Ongeveer R224 - R484 per vak

Waar: M.L. Sultan Technikon Engelsmedium

Nasionale Diploma: Elektriese Ingenieurswese

Duur: 3 jaar voltyds: 2 jaar formele opleiding en 1 jaar ervaringsopleiding

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met vakke op HG of SG

Vakke vereis: Wiskunde HG, Engels Eerste Taal en Natuur- en Skeikunde of Fisika

Keuring: Meriete

Gelde: R3720 p.j.

Waar: Technikon SA

Afrikaans en Engelsmedium

Nasionale Diploma: Elektriese Ingenieurswese: Prosesinstrumentasie

Korrespondensie-kursus;

Duur: 3 jaar

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met 'n maksimum van twee vakke op LG (die twee amptelike tale mag nie op LG wees nie) OF N3 met minstens vier N3-vakke met 'n minimumpunt van 50%

Vakke vereis: Senior Sertifikaat: Wiskunde en Natuur- en Skeikunde HG of SG en ten minste twee tale op HG of SG. N3: Wiskunde N3 en Ingenieurswetenskap N3 en ten minste twee tale op HG of SG

Bykomende vereistes: Studente moet in 'n ingenieursverwante beroep staan

Nota: NB: Hierdie kursus sal moontlik in 1994 aangebied word, onderhewig aan goedkeuring

Gelde: R430 per vak

Waar: Technikon SA

Afrikaans en Engelsmedium

Nasionale Diploma: Elektriese Inge-

nierswese: Sterkstroom

Korrespondensie-kursus;

Duur: 3 jaar

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met 'n maksimum van twee vakke op LG (die twee amptelike tale mag nie op LG wees nie) OF N3 met minstens vier N3-vakke met 'n minimumpunt van 50%

Vakke vereis: Senior Sertifikaat: Wiskunde en Natuur- en Skeikunde HG of SG en ten minste twee tale op HG of SG. N3: Wiskunde N3 en Ingenieurswetenskap N3 en ten minste twee tale op HG of SG

Bykomende vereistes: Studente moet in 'n ingenieursverwante beroep staan

Nota: NB: Hierdie kursus sal moontlik in 1994 aangebied word, onderhewig aan goedkeuring

Gelde: R430 per vak

Waar: Transkei Technikon

Engelsmedium

Nasionale Diploma: Elektriese Ingenieurswese

Duur: 3 jaar voltyds (6 maande ervaringsopleiding ingesluit)

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating

Keuring: Kandidate word gekeur

Gelde: R3950 p.j.

Waar: Technikon OVS

Afrikaans- of Engelsmedium

Nasionale Diploma: Elektriese Ingenieurswese

Rigtings: Sterkstroom; Swakstroom

Duur: 3 jaar: 24 maande formele opleiding en 12 maande toepaslike ervaringsopleiding

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met 'n minimum van 5 vakke op HG en/of SG, amptelike tale ingesluit. 'n Vak op LG is slegs toelaatbaar indien dit nie in die onderligprogram vereis word nie

Vakke vereis: Wiskunde en Natuur- en Skeikunde HG of SG

Keuring: Akademiese prestasie en persoonlike onderhoud indien nodig

Gelde: R160 - R315 per vak

Waar: Vaaldriehoekse Technikon

Afrikaans- en Engelsmedium

Nasionale Diploma: Elektriese Ingenieurswese

Rigtings: Elektronika; Elektroniese Kommunikasie; Instrumentasie; Swaarstroom

Duur: 3 jaar voltyds

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met 'n minimum van 4 vakke op HG of SG (amptelike tale ingesluit) of N3 met 4 vakke (50%) asook beide amptelike tale op Senior Sertifikaatvlak

Vakke vereis: Wiskunde en Natuur- en Skeikunde HG of SG

Keuring: Puntestelsel

Gelde: Eerste semester: R2215; tweede semester: R1895; derde semester: R2089;

vierde semester: R2115

Waar: Port Elizabethse Technikon

Afrikaans- en Engelsmedium

Nasionale Diploma: Elektriese Ingenieurswese

Duur: 3 jaar voltyds: 24 maande formele opleiding en 12 maande toepaslike ervaringsopleiding

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating sonder enige LG-vakke of 'n N3-sertifikaat met vier vakke plus albei amptelike tale

Vakke vereis: Eerste Taal HG (E-simbool) of SG (D-simbool) en 'n goeie slaagpunt in Wiskunde en Natuur- en Skeikunde of Fisika vir Senior Sertifikaat. N3-sertifikaat: Wiskunde en Ingenieurswetenskap (C-simbool) asook albei amptelike tale op Senior Sertifikaatvlak

Keuring: Akademiese prestasie

Gelde: R190 - R470 per vak

Waar: Technikon Skiereiland

Engels- of Afrikaansmedium

Nasionale Diploma: Elektriese Ingenieurswese

Rigtings: Swakstroom; Sterkstroom

Duur: 3 jaar voltyds: 24 maande formele opleiding en 12 maande toepaslike indiensopleiding

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating of N3

Vakke vereis: Wiskunde en Natuur- en Skeikunde HG (E-simbool) of SG (D-simbool) vir Senior Sertifikaat. Ingenieurswetenskap N4 en Wiskunde N4 (C-simbool) asook beide amptelike tale word vereis vir N3

Keuring: Akademiese prestasie en aanlegtoets

Gelde: Ongeveer R161 - R310 per vak

Waar: Technikon Natal

Afrikaans- of Engelsmedium

Nasionale Diploma in Elektriese Ingenieurswese: Sterkstroom

Duur: 3 jaar voltyds: 2 jaar formele opleiding en 1 jaar ervaringsopleiding

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met 'n minimum van 4 vakke op HG en/of SG, amptelike tale ingesluit. Vakke op LG is slegs toegelaatbaar indien dit nie in die onderligprogram vereis word nie

Vakke vereis: Engels Eerste Taal HG (E-simbool) of SG (D-simbool) of Engels Tweede Taal HG (C-simbool) of SG (B-simbool) asook goeie punte in Wiskunde en Natuur- en Skeikunde

Gelde: R2617 per semester (R607 per vak)

HOUTPRODUKSIE-INGENIEURSWESE

Beroep(e): Houtproduksie-ingenieurstechnikus

Persoonlike vereistes: Natuurwetenskaplik ingestel, 'n belangstelling in die tegnologie en vermoë om met mense te werk

Aard van werk: Is behulpzaam met die verwerking van hout en die produksie van verskeie houtprodukte

Waar: Port Elizabethse Technikon

Afrikaans- en Engelsmedium

Nasionale Diploma: Houtproduksie-ingenieurswese

Duur: 6 semesters: 4 akademiese semesters te Saasveld en twee praktiese ervaringssemesters

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating (LG-vakke is onaanvaarbaar)

Vakke vereis: Eerste Taal HG (E-simbool) of SG (D-simbool - 'n E-simbool is aanvaarbaar indien dit 'n omgesette HG-punt is

Vakke aanbeveel: Wiskunde; Natuur- en Skeikunde en kennis van 'n Afrika-taal

Bykomende vereistes: Voltooid nasionale dienspelig is verkieslik en fisiese fiksheid en gesondheid

Keuring: Akademiese meriete en 'n aanlegtoets

Gelde: R390 per vak

KARTOGRAFIE

Beroep(e): Kartograaf

Persoonlike vereistes: Vermoë om idees op papier weer te gee, tekenvaardigheid, goeie ruimtelike persepsie en die vermoë om met detail te werk

Aard van werk: Stel kaarte uit foto's, verslae, manuskripte, ander kaarte en statistiese verslae saam; verwerk bronmateriaal; pas fotoligrafie, fotografiese verwerkingsprosesse en rekenaar-tegnologie toe

Waar: Kaapse Technikon

Afrikaans- of Engelsmedium

Nasionale Diploma: Kartografie

Duur: 3 jaar voltyds

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met ses vakke op HG en/of SG

Vakke vereis: Eerste Taal HG en Tweede Taal SG. Wiskunde SG (D-simbool) of HG (E-simbool) of N4 Wiskunde (minstens 50%)

Keuring: Psigometriese toetse, aanlegtoetse of persoonlike onderhoud

Gelde: Ongeveer R3000 - R6000 p.j.

Waar: Technikon Pretoria
Afrikaans- of Engelsmedium
Nasionale Diploma: Kartografie
Duur: 3 jaar: 4 semesters teoretiese opleiding en 2 semesters ervaringsopleiding
Toetreekwilifikasie: Senior Sertifikaat sonder universiteitstoelating met 'n maksimum van twee vakke op LG. Die vakke op LG is slegs toelaatbaar indien dit nie in die onderrigprogram vereis word nie
Vakke vereis: Wiskunde en Natuur- en Skeikunde HG (E-simbool) of SG (C-simbool)
Keuring: Akademiese prestasie
Gelde: Eerste semester: R224 - R480 per vak; tweede semester: R254 - R452 per vak; derde semester: R386 - R456 per vak; vierde semester: R386 - R506 per vak

MARITIEME STUDIES

Waar: Technikon Natal
Afrikaans- of Engelsmedium
Nasionale Diploma: Maritieme Studies
Duur: 3 jaar: 18 formele opleiding en 18 maande ervaringsopleiding
Toetreekwilifikasie: Senior Sertifikaat sonder universiteitstoelating (maksimum van twee LG-vakke, amptelike tale uitgesluit en slegs aanvaarbaar indien dit nie 'n vereiste vir die onderrigprogram is nie)
Vakke vereis: Wiskunde en nog een natuurwetenskapvak. Engels Eerste Taal HG (E-simbool) of SG (D-simbool) of Engels Tweede Taal HG (C-simbool) of SG (B-simbool)
Gelde: R2670 per semester of R620 per vak

MEGANIESE INGENIEURS-WESE

Beroep(e): Meganiese ingenieurstechnikus
Persoonlike vereistes: Die vermoë om goeie besluite te neem en om toesig te hou oor mense in die uitvoer van tegniese en administratiewe take
Aard van werk: Betrokke by die ontwerp, konstruksie en onderhoud van meganiese

apparaat en verantwoordelik vir die toepassing van die regte tegnieke om die ingenieur se ontwerp prakties uit te voer

Waar: Technikon OVS
Afrikaans- of Engelsmedium
Nasionale Diploma: Meganiese Ingenieurswese
Duur: 3 jaar voltyds of deelyds: 2 jaar formele opleiding en 1 jaar ervaringsopleiding
Toetreekwilifikasie: Senior Sertifikaat sonder universiteitstoelating met 'n minimum van 5 vakke op HG of SG, wat die amptelike tale insluit. 'n Vak op LG is slegs aanvaarbaar indien dit nie 'n vereiste vir die onderrigprogram is nie
Vakke vereis: Wiskunde en Natuur- en Skeikunde. Minstens 'n C-simbool vir Funkionele Wiskunde
Keuring: Akademiese prestasie en moontlike persoonlike onderhoud
Gelde: R315 per vak per semester; Meganiese Ingenieurswese Praktijk: R160 per vak per semester

Waar: Port Elizabethse Technikon
Afrikaans- en Engelsmedium
Nasionale Diploma: Meganiese Ingenieurswese
Duur: 3 jaar voltyds: 2 jaar formele opleiding en 1 jaar ervaringsopleiding
Toetreekwilifikasie: Senior Sertifikaat sonder universiteitstoelating (slegs HG- of SG-vakke) of die N3-Sertifikaat plus twee tale op Senior Sertifikaat-vlak
Vakke vereis: Eerste Taal, Wiskunde en Natuur- en Skeikunde HG (E-simbool) of SG (D-simbool) vir Senior Sertifikaat. 'n Minimum van 50% vir Wiskunde en Toegepaste Wetenskap vir die N3-Sertifikaat
Keuring: Akademiese prestasie
Gelde: R140 - R380 per vak

Waar: Technikon Pretoria; Technikon Pretoria (Nelspruit-kampus); Technikon Pretoria (Witbank-kampus)
Afrikaans- en Engelsmedium
Nasionale Diploma: Meganiese Inge-

niuerswese

Rigtings: Algemeen; Lugvaartingenieurswese; Motorvoertuigenienuerswese

Duur: 3 jaar voltyds; 2 jaar formele opleiding en 1 jaar toepaslike ervaringsopleiding

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met 'n maksimum van twee LG-vakke. Vakke op LG is slegs aanvaarbaar indien dit nie in die onderrigprogram vereis word nie

Vakke vereis: Wiskunde en Natuur- en Skeikunde HG 40% of Wiskunde SG 60% plus Natuur- en Skeikunde SG 50%

Keuring: Toelating aan keuring onderworpe

Gelde: Eerste en tweede ervaringsonderdrygtydperk: R100 elk; eerste formele klasbywoning: R254 - R470 per vak; tweede bywoning: R398 - R422 per vak; derde bywoning: R406 - R452 per vak; vierde bywoning: R386 - R406 per vak

Waar: Vaaldriehoekse Technikon Afrikaans- of Engelsmedium

Nasionale Diploma: Meganiese Ingenieurswese

Duur: 3 jaar (ervaringsopleiding ingesluit) **Toetreekwalifikasie:** Senior Sertifikaat sonder universiteitstoelating met minstens 4 vakke op HG of SG of op N3-vlak

Vakke vereis: Wiskunde, Natuur- en Skeikunde en albei amptelike tale HG of SG. 'n Minimum van 50% vir N3-Wiskunde en -Ingenieurwetenskap. 'n Ander taal mag Engels of Afrikaans vervang

Keuring: Puntestelsel en moontlike plasingstoets

Gelde: Eerste semester: R2215; tweede semester: R1753; derde en vierde semester: R2088 per semester

Waar: Technikon Noord-Transvaal Engelsmedium

Nasionale Diploma: Meganiese Ingenieurswese

Rigtings: Pas- en Draaiwerk; Sweis- en Metaalwerk; Motorwerktuigkunde

Duur: 3 jaar: 4 semesters formele oplei-

ding en 2 semesters ervaringsopleiding

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met 'n C-simbool gemiddeld of 'n N4-Sertifikaat met minstens vyf toepaslike vakke of die suksesvolle voltooiing van die Potentiality Development Programme

Vakke vereis: 'n Slaagpunt in Engels en Natuur- en Skeikunde en minstens 'n C-simbool in Wiskunde, word vir die Senior Sertifikaat vereis. 'n Slaagpunt in Engels en minstens 60% vir Wiskunde, word vir die N4-Sertifikaat vereis

Keuring: 'n Aanlegtoets

Nota: Die Potentiality Development Programme is beskikbaar vir studente wie se matrieksimbole nie aan die vereiste standaard voldoen nie. 'n Senior Sertifikaat sonder universiteitstoelating met 'n HG-slaagpunt of 'n E-simbool in Wiskunde en Natuur- en Skeikunde en 'n slaagpunt in Engels, word vir toelating tot die program vereis. 1993-inligting

Gelde: 1994: R360 per vak per semester

Waar: Technikon Natal

Afrikaans- of Engelsmedium

Nasionale Diploma: Meganiese Ingenieurswese

Duur: 2 jaar formele opleiding en 1 jaar ervaringsopleiding

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating (maksimum van twee LG-vakke, amptelike tale uitgesluit en slegs aanvaarbaar indien dit nie 'n vereiste vir die onderrigprogram is nie)

Vakke vereis: Engels Eerste Taal HG (E-simbool) of SG (C-simbool) of Engels Tweede Taal HG (C-simbool) of SG (B-simbool)

Keuring: Akademiese prestasie

Nota: Voorkeur aan studente met HG slaagpunte in Wiskunde, Natuur- en Skeikunde en Engels Eerste Taal

Gelde: R2590 per semester of R600 per vak

Waar: Transkei Technikon Engelsmedium

Nasionale Diploma: Meganiese Ingenieurswese

Duur: 3 jaar voltyds (een semester ervaringsopleiding ingesluit)

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating

Keuring: Toelating aan keuring onderworpe

Gelde: R3950 p.j.

Waar: Kaapse Technikon

Afrikaans- of Engelsmedium

Nasionale Diploma: Meganiese Ingenieurswese

Duur: 3 jaar voltyds: 2 jaar formele opleiding en 1 jaar toepaslike ervaringsopleiding

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met ses vakke op HG of SG en 'n D-simbool gemiddeld

Vakke vereis: Eerste Taal HG en Tweede Taal SG. Wiskunde en Natuur- en Skeikunde SG (D-simbool) of HG (E-simbool) vir Senior Sertifikaat en minstens 60% vir N4

Keuring: Psigometriese of aanlegtoetse of 'n persoonlike onderhoud

Gelde: Ongeveer R3000 - R6000 p.j.

Waar: Mangosuthu Technikon

Engelsmedium

Nasionale Diploma: Meganiese Ingenieurswese

Rigtings: Algemeen; Motorvoertuig

Duur: 3 jaar: 4 semesters formele opleiding en 2 semesters toepaslike indiensopleiding

Toetreekwalifikasie: 'n Slaagpunt in die Pre-Tegniskuskursus of gelykstaande kwalifikasie

Keuring: Toelating aan keuring onderworpe

Gelde: R1960 per semester of R505 per vak

Waar: Technikon Witwatersrand

Afrikaans- of Engelsmedium

Nasionale Diploma: Meganiese Inge-

niieurswese

Duur: 3 jaar

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating of N3 met die nodige vereistes

Vakke vereis: Wiskunde en Natuur- en Skeikunde (Skei-Nat) HG (E-simbool) of SG (C-simbool). Eerste taal HG (E-simbool) of SG (D-simbool)

Vakke aanbeveel: Tegniese Tekene en Rekenaarwetenskap

Keuring: Persoonlike onderhoud en keuringstoete

Gelde: Ongeveer R380 per vak per semester

Waar: Technikon SA

Afrikaans- of Engelsmedium

Nasionale Diploma: Meganiese Ingenieurswese

Korrespondensie

Duur: 3 jaar (ervaringsopleiding ingesluit)

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met 'n maksimum van 2 vakke op LG (amptelike tale uitgesluit) of 'n N3-Sertifikaat met minstens 4 vakke (minimum 50%)

Vakke vereis: Wiskunde en Natuur- en Skeikunde HG of SG vir Senior Sertifikaat. Wiskunde N3 en Ingenieurswetenskap N3 plus twee tale HG of SG vir die N3-Sertifikaat

Bykomende vereistes: Kandidate moet in 'n ingenieursverwante rigting werksaam wees

Gelde: R430 per vak

Waar: Technikon Skiereiland

Afrikaans- of Engelsmedium

Nasionale Diploma: Meganiese Ingenieurswese

Duur: 3 jaar voltyds, ervaringsopleiding ingesluit

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating of 'n N3 Sertifikaat

Vakke vereis: Wiskunde en Natuur- en Skeikunde HG (D-simbool) of SG (C-simbool) (vir Senior Sertifikaat). 'n Slaag-

punt in die amptelike tale op standerd 10-vlak plus Wiskunde en Ingenieurswetenskap op N3- en N4-vlak vir die N3 Sertifikaat

Gelde: Ongeveer R161 - R310 per vak

Waar: M.L. Sultan Technikon
Engelsmedium

Nasionale Diploma: Meganiese Ingenieurswese

Duur: 3 jaar voltyds: 2 jaar formele opleiding en 1 jaar ervaringsopleiding

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating (slegs HG- of SG-vakke) of N3

Vakke vereis: Wiskunde HG, Natuur- en Skeikunde en Engels Eerste Taal (of 'n ander taal) vir Senior Sertifikaat OF Wiskunde, Toegepaste Wetenskap, Engels en Afrikaans (of 'n ander taal) vir die N3-Sertifikaat

Keuring: Akademiese prestasie

Gelde: R3720 p.j.

METAALMYNBOU

Beroep(e): Mynboutegnikus

Persoonlike vereistes: Fisies gesond en fiks, en bereid om ondergronds te werk

Aard van werk: Betrokke by die beheer van die produksieafdeling van 'n myn en verantwoordelik vir aspekte soos die myn-apparaat, lugreëling, vervoer en verwerking van erts, plofstowwe, ens.

Waar: Technikon SA

Afrikaans- of Engelsmedium

Nasionale Diploma: Metaalmynbou

Korrespondensie-kursus;

Duur: 3 jaar

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating (maksimum van 2 LG-vakke, amptelike tale uitgesluit)

Vakke vereis: Wiskunde

Vakke aanbeveel: Chemie en Fisika

Bykomende vereistes: Student moet op 'n myn of in 'n mynbouervante beroep werksaam wees

Gelde: R430 per vak

Waar: Technikon Witwatersrand

Afrikaans- of Engelsmedium

Nasionale Diploma: Metaalmynbou

Duur: 3 jaar

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating

Vakke vereis: Wiskunde HG (E-simbool) of SG (D-simbool)

Vakke aanbeveel: Natuur- en Skeikunde
Bykomende vereistes: 'n 'Rooikaart' vir liggaamlike gesondheid van die Mediese Buro sal vereis word vir indiensneming in die mynbedryf

Keuring: Akademiese prestasie en persoonlike onderhoude

Nota: Voornemende studente kan die bedryf nader vir tydelike betrekkings om sodoende die nodige ervaringsopleiding te verkry. 'n Oorbruggingskursus kan gevolg word deur kandidate wat nie aan die minimum toelatingsvereistes voldoen nie

Gelde: Ongeveer R480 per vak

METALLURGIESE INGENIEURSWESE

Beroep(e): Metallurgiese ingenieurstechnikus

Persoonlike vereistes: 'n Belangstelling in die aanwending van natuurwetenskaplike vaardighede in die oplos van probleme

Aard van werk: Doen navorsing t.o.v. nuwe prosesse om beter metale te lewer, is behulpsaam met toesighouding in die produksieprosesse en bespreek tegniese sake met kliënte

Waar: Technikon Witwatersrand

Afrikaans- of Engelsmedium

Nasionale Diploma: Metallurgiese Ingenieurswese

Duur: 3 jaar

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating

Vakke vereis: Wiskunde en Natuur- en Skeikunde HG (D-simbool) of SG (C-

simbool)

Bykomende vereistes: 'n 'Rooi kaart' vir fiksheid van die Mediese Buro vir indiensneming in die mynindustrie

Keuring: Akademiese prestasie en persoonlike onderhoude

Nota: Voornemende studente kan die industrie nader vir tydelike betrekking gedurende hulle studies om sodoende genoeg ervaringsopleiding te kry. 'n Oorbruggingskursus kan gevolg word deur persone wat nie aan die minimum toelatingsvereistes voldoen nie

Gelde: Ongeveer R380 per vak per semester

Waar: Vaaldriehoekse Technikon

Afrikaans- en Engelsmedium

Nasionale Diploma: Metallurgiese Ingenieurswese

Rigtings: Fisiese Metallurgie; Ekstrasiesmetallurgie

Duur: 3 jaar (ervaringsopleiding ingesluit)

Toetreekwilifikasie: Senior Sertifikaat sonder universiteitstoelating met ten minste 4 vakke op HG of SG of op N3-vlak

Vakke vereis: Senior Sertifikaat: Wiskunde, Natuur- en Skeikunde en albei amptelike tale HG of SG. N3: Wiskunde en Ingenieurswetenskap minstens 50% en Afrikaans en Engels op N3-vlak. Afrikaans of Engels mag deur 'n ander taal vervang word

Keuring: Puntestelsel en moontlike plasingstoets

Gelde: Eerste semester: R2617; tweede semester: R2313; derde semester: R2088

Waar: Technikon Pretoria

Afrikaans- en Engelsmedium

Nasionale Diploma: Metallurgiese Ingenieurswese

Duur: 3 jaar voltyds: 18 maande formele opleiding en 18 maande toepaslike indiensopleiding

Toetreekwilifikasie: Senior Sertifikaat sonder universiteitstoelating met 'n maksimum van twee LG-vakke. Vakke op LG is slegs aanvaarbaar indien dit nie in die

onderrigprogram vereis word nie

Vakke vereis: Wiskunde en Natuur- en Skeikunde

Vakke aanbeveel: Nog 'n natuurwetenskapvak

Keuring: Toelating is aan keuring onderworpe

Gelde: Eerste semester: R412 - R544 per vak; tweede semester: R224 - R564 per vak; derde semester: R474 - R728 per vak

Waar: Port Elizabethse Technikon

Afrikaans- en Engelsmedium

Nasionale Diploma: Metallurgiese Ingenieurswese

Duur: 3 jaar voltyds: 18 maande formele opleiding en 18 maande ervaringsopleiding

Toetreekwilifikasie: Senior Sertifikaat sonder universiteitstoelating (slegs HG- of SG-vakke) of die N3-Sertifikaat met twee tale op Senior Sertifikaat-vlak

Vakke vereis: Eerste Taal, Wiskunde en Natuur- en Skeikunde HG (E-simbool) of SG (S-simbool) vir Senior Sertifikaat. Minstens 50% vir Wiskunde en Toegepaste Wetenskap vir die N3-Sertifikaat

Keuring: Akademiese prestasie

Gelde: R190 - R530 per vak

MYNOPMETING

Beroep(e): Mynopmetingstechniek

Persoonlike vereistes: Fisies fiks, geniet praktiese en fisiese aktiwiteite, goeie kommunikasievaardighede en vermoë om onder druk te werk

Aard van werk: Beplan die rigting en omvang, van ondergrondse aktiwiteite met behulp van gevorderde opmetingstechnieke en -apparaat

Waar: Technikon Witwatersrand

Afrikaans- of Engelsmedium

Nasionale Diploma: Mynopmeting

Duur: 3 jaar

Toetreekwilifikasie: Senior Sertifikaat sonder universiteitstoelating

Vakke vereis: Wiskunde HG (D-simbool) of SG (C-simbool)

Vakke aanbeveel: Tegniese Tekene en

Natuur- en Skeikunde

Bykomende vereistes: 'Rooikaart' vir liggaamlike geskiktheid van die Mediese Buro vir indiensneming in die mynindustrie
Keuring: Meriete en persoonlike onderhoude

Nota: 'n Oorbruggingskursus word aangebied vir kandidate wat nie aan die minimum toelatingsvereistes voldoen nie. Voornemende studente kan vir tydelike betrekings by die industrie aansoek doen om sodoende genoegsame ervaringsopleiding te verkry

Gelde: Ongeveer R480 per vak

Waar: Technikon SA

Afrikaans- of Engelsmedium

Nasionale Diploma: Mynopmeting

Korrespondensie-kursus;

Duur: 3 jaar

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating (maksimum van twee LG-vakke, amptelike tale uitgesluit)

Vakke vereis: Wiskunde

Bykomende vereistes: Student moet op 'n myn of in 'n mynbouwerwante beroep werksaam wees

Gelde: R430 per vak

NIE-GERIGTE PROGRAMME

Waar: Technikon SA

Afrikaans- en Engelsmedium

Sertifikaatprogram

Korrespondensie-kursus

Rigtings: Aankoopbestuur; Baangrasbestuur; Bemarking; Besigheidsbelasting & Regswese; Drukkerybestuur; Eiendoms-wese; Intern ouditkunde; Kleinhandelsakebestuur; Landskapontwerp; Maatskappy-administrasie; Method- & Time Measurement; Munisipale Administrasie; Nywerheidsverhoudinge; Openbare Bestuur & Administrasie; Owerheidsfinansies; Personeelbestuur; Plaaslike Owerheidsfinansies; Plant- en Plaaigbeheer; Planteteelt; Plantkunde; Produksiebestuur; Registrasie van Aktes; Rekeningkunde; Sakestudies;

Staatsrekeninge & Finansies; Binnelandse Inkomste; Stedelike Omgewingsbestuur; Tuinbou; Tuinboubestuur; Tuinboumeganisasie; Tuinboupraktyk; Veiligheidsbestuur; Verpakkingsbestuur; Werkstudie: Fabriek; Werkstudie: Kantore; Werkstudie: Staatsdiens

Duur: 1 jaar

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met nie meer as twee vakke op LG nie, Engels en Afrikaans uitgesluit

Nota: Die Sertifikaatprogramme is slegs vir NUWE studente bedoel en nie vir bestaande diplomastudente nie. Studente wat nog nie sekerheid het oor hulle studierigting nie, kan vakke vanuit verskillende diplomas kies en na selfevaluering van hul vordering, 'n rigting kies, met behoud van krediet vir toepaslike vakke. Die sertifikaatprogramme dien as toetreoete tot 'n nasionale diploma, met volwaardige vak-krediete

Gelde: R390 per vak

Waar: Technikon SA

Afrikaans- en Engelsmedium

Hoër Sertifikaatprogram

Korrespondensie-kursus

Rigtings: Munisipale Administrasie; Openbare Bestuur & Administrasie; Plaaslike Owerheidsfinansies; Tuinbou

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating (met nie meer as twee vakke op die LG nie, amptelike tale uitgesluit)

Nota: Hierdie programme is slegs vir NUWE studente bedoel en nie vir bestaande diplomastudente nie. Studente wat nog nie sekerheid het oor hulle studierigting nie, kan nou vakke vanuit verskillende diplomas kies en na selfevaluering van hul vordering, 'n rigting kies met behoud van toepaslike vakke reeds geslaag. Die kursus dien as 'n toetreoete tot 'n nasionale diploma, met volwaardige vakkrediete

Gelde: R390 per vak

NIE-VERNIETIGENDE TOETSING

Beroep(e): Tegnikus (Nie-vernietigende toetsing)

Persoonlike vereistes: Verantwoordelik, deursettingsvermoë en vermoë om onafhanklik te werk

Aard van werk: Voer toetse op reeds vervaardigde produkte uit om te bepaal of foute binne spesifikasies bestaan en om te verseker dat produkte geskik is vir gebruik

Waar: Vaaldriehoekse Technikon

Afrikaans- en Engelsmedium

Nasionale Diploma: Nie-vernietigende Toetsing

Duur: 3 jaar

Toetreekwalikasie: Senior Sertifikaat sonder universiteitstoelating met minstens 4 vakke op HG of SG

Vakke vereis: Albei amptelike tale op HG of SG. Wiskunde en Natuur- en Skeikunde HG (E-simbool) of SG (D-simbool)

Keuring: Puntestelsel en moontlike plasingstoets

Gelde: Eerste semester: R2215; tweede semester: R2088; derde semester: R2050

OORBRUGGINGSKURSUSSE

Waar: Mangosuthu Technikon

Engelsmedium

Pre-tegnies

Duur: 6 maande

Toetreekwalikasie: Senior Sertifikaat sonder universiteitsopleiding of N3 of 'n toepaslike GCE-sertifikaat

Vakke vereis: Wiskunde, Natuur- en Skeikunde of Biologie, Engels en 'n ander taal

Keuring: Akademiese meriete

Gelde: R1200 per semester

Waar: Port Elizabethse Technikon

Afrikaans- en Engelsmedium

Pre-tegniese Kursus

Rigtings: Analitiese Chemie, Siviele Ingenieurswese, Elektriese Ingenieurswese,

Omgewingsgesondheid, Bedryfsingenieurswese, Meganiese Ingenieurswese, Biomediese Ingenieurswese en Radiografie

Duur: 2 semesters

Toetreekwalikasie: Senior Sertifikaat sonder universiteitstoelating

Vakke vereis: Engels, Wiskunde en Natuur- en Skeikunde

Gelde: R320 per vak

Waar: Border Technikon

Engelsmedium

Tersiëre Oorbruggingskursus

Duur: 1 jaar voltyds

Toetreekwalikasie: Senior Sertifikaat sonder universiteitstoelating

Vakke vereis: Wiskunde F-simbool en Natuur- en Skeikunde

Keuring: Akademiese meriete

Nota: Hierdie kursus stel kandidaat instaat om studies aan die Border Technikon of enige ander tersiëre instelling voort te sit. 1993-inligting

Gelde: R1660

OPMETING

Beroep(e): Opmetingstegnikus

Persoonlike vereistes: Moet daarvan hou om buite te werk, te reis, gevorderde tegnologie te gebruik en goeie menseverhoudinge te handhaaf

Aard van werk: Versamel relevante data en verwerk dit tot inligting op 'n plan. Geodetiese positionering behels die bepaling van koördinate om onder andere die vorm van die aarde vas te stel; kadastrale opmeting het te doen met die opmeet van eiendom; hidrografie behels die kartering van die seebodem; mynometing behels ondergrondse opmetings; topografiese opmeting behels die fisiese eienskappe bo-op die grond en ingenieursopmeting behels die uitleë van paaie, snelweë, brue e.d.m.

Waar: M.L. Sultan Technikon

Engelsmedium

Nasionale Diploma: Opmeting

Duur: 4 semesters voltyds en 2 semesters indiensopleiding

Toetreekwalikasie: Senior Sertifikaat

sonder universiteitstoelating met vakke op HG en/of SG

Vakke vereis: Engels (Eerste Taal), Afrikaans of 'n ander taal en Wiskunde

Vakke aanbeveel: Natuur- en Skeikunde en/of Tegniese Tekene

Keuring: Akademiese meriete

Gelde: R3720 per jaar of R1860 per semester

Waar: Technikon Natal

Afrikaans- of Engelsmedium

Nasionale Diploma: Opmeting

Duur: 3 jaar: 2 jaar formale opleiding en 1 jaar toepaslike indiensopleiding

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met 'n minimum van vier vakke op HG en/of SG, amptelike tale ingesluit (vakke op LG is slegs toelaatbaar indien dit nie in die onderrigprogram vereis word nie) of die N3 Sertifikaat met 4 vakke plus die amptelike tale

Vakke vereis: Engels Eerste Taal HG (E-simbool) of SG (D-simbool) of Engels Tweede Taal HG (C-simbool) of SG (B-simbool) en Wiskunde HG (E-simbool) of SG (D-simbool)

Keuring: Akademiese meriete

Gelde: R2630 per semester of R610 per vak

Waar: Technikon Pretoria

Afrikaans- of Engelsmedium

Nasionale Diploma: Opmeting

Duur: Vier semesters teoretiese opleiding en twee semesters goedgekeurde ervarings-onderrig

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating ('n maksimum van 2 vakke op LG - slegs aanvaarbaar indien dit nie in die program van studie vereis word nie)

Vakke vereis: Wiskunde HG (E-simbool) of SG (C-simbool) en Natuur- en Skeikunde HG (E-simbool) of SG (C-simbool)

Keuring: Akademiese prestasie en toepaslike vakke

Nota: Studente is verplig om by die SA

Raad vir Professionele Landmeters en Tegniese Opmeters as tegnikus-in-opleiding te registreer

Gelde: R224 - R506 per vak per semester

Waar: Technikon Noord-Transvaal
Engelsmedium

Nasionale Diploma: Opmeting

Duur: 6 semesters: 4 semesters voltyds by die Technikon en 2 semesters ervaringsopleiding by 'n goedgekeurde werkgewer

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating (C-simbool gemiddeld) of N4 met 5 toepaslike vakke of suksesvolle voltooiing van die Potentiality Development Programme

Vakke vereis: Senior Sertifikaat: Wiskunde (C-simbool), Natuur- en Skeikunde en Engels. N4: Wiskunde (60%) en 'n slaagpunt in Engels

Keuring: Aanlegtoetse

Nota: Die Potentiality Development Programme is beskikbaar vir studente wie se matrieksimbole nie aan die vereiste standaard voldoen nie. 'n Senior Sertifikaat sonder universiteitstoelating met 'n HG-slaagpunt of 'n E-simbool in Wiskunde en Natuur- en Skeikunde en 'n slaagpunt in Engels, word vir toelating tot die program vereis. 1993-inligting

Gelde: 1994: R360 per vak per semester

Waar: Kaapse Technikon

Afrikaans- of Engelsmedium

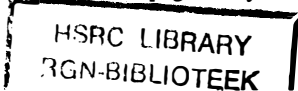
Nasionale Diploma: Opmeting

Duur: 3 jaar voltyds: 18 maande formele opleiding en 18 maande toepaslike indiensopleiding

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating (ses vakke op HG en/of SG)

Vakke vereis: Eerste Taal HG en Tweede Taal SG; Wiskunde SG (D-simbool) of HG (E-simbool) of N4-Wiskunde minstens 50% (Funksionele Wiskunde is nie aanvaarbaar nie)

Keuring: Psigometriese toetsing en/of aanlegtoetse en/of 'n persoonlike onderhoud



Gelde: Ongeveer R3000 - R6000 p.j.

Waar: Technikon Skiereiland

Afrikaans- of Engelsmedium

Nasionale Diploma: Opmeting

Duur: 3 jaar: 2 jaar formele opleiding en een jaar indiensopleiding by 'n goedgekeurde siviele ingenieurskonsultant, kontrakteur of landmeter. Landmeetkunde: 1 jaar formele opleiding en 1 jaar ervaringsopleiding. Die derde jaar sal aangebied word as die behoefte daarvoor ontstaan

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating of N3-Sertifikaat

Vakke vereis: Senior Sertifikaat: Wiskunde; N3-Sertifikaat: Een taal (dit hoef nie Afrikaans of Engels te wees nie) as Eerste Taal SG en een amptelike taal as Tweede Taal SG

Gelde: Ongeveer R161 per vak p.j.

Waar: Technikon Witwatersrand

Engelsmedium

Nasionale Diploma: Opmeting

Duur: 3 jaar

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating

Vakke vereis: Natuur- en Skeikunde en die Eerste Taal (HG: D-simbool in die een en HG: E-simbool in die ander), Tweede Taal SG (D-simbool) en Wiskunde HG (D-simbool)

Vakke aanbeveel: Rekenaarwetenskap en Aardrykskunde

Keuring: Keuringstoets en 'n persoonlike onderhoud, indien nodig

Gelde: 6 vakke @ ongeveer R760 elk p.j. of R380 elk per semester

Waar: Mangosuthu Technikon

Engelsmedium

Nasionale Diploma: Opmeting

Duur: 4 semesters formele opleiding en 2 semesters toepaslike indiensopleiding

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating

Vakke vereis: Engels, Wiskunde en 'n

wetenskapvak

Keuring: Akademiese prestasie

Gelde: R1960 per semester

OPPERVLAKMYNBOU

Beroep(e): Mynboutegnikus

Persoonlike vereistes: Fisies fiks, aanpasbaar by veranderende omstandighede, verantwoordelik en saamwerkend

Aard van werk: Ondersoek dikwels mineeraalneerslae saam met geoloë. Neem verantwoordelikheid t.o.v. aspekte soos myntoerusting, plofstowwe, vervoer en verwerking van erts, ens.

Waar: Technikon SA

Afrikaans- of Engelsmedium

Nasionale Diploma: Oppervlakmynbou

Korrespondensie-kursus;

Duur: 3 jaar. Bewys moet gelewer word dat student ten minste drie jaar by 'n myn of in 'n mynbouverwante beroep werksaam was

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met 'n maksimum van twee vakke op LG (die twee vakke op LG moet die amptelike tale uitsluit)

Vakke vereis: Wiskunde

Vakke aanbeveel: Chemie en Fisika

Bykomende vereistes: Student moet by 'n myn of in 'n mynbouverwante beroep werksaam wees

Gelde: R430 per vak

SIVIELE INGENIEURSWESE

Beroep(e): Siviele ingenieurstechnikus

Persoonlike vereistes: Wiskundige vermoëns, vermoë om logies te dink, om onafhanklik besluite te neem, verbaal en grafies te kommunikeer, sistematies en as deel van 'n span te werk

Aard van werk: Beplan, ontwerp, bou en onderhou projekte rakende paaie, lughawens, geboue, damme, besproeiingskemas, watervoorsiening en suiweringswerke

Waar: Technikon OVS
Afrikaans- of Engelsmedium
**Nasionale Diploma in Siviele Inge-
nieurswese**

Duur: 3 jaar voltyds: 2 jaar formele oplei-
ding en 1 jaar ervaringsopleiding

Toetreekwalifikasie: Senior Sertifikaat
sonder universiteitstoelating met 'n mini-
mum van 5 vakke op HG en/of SG, ampte-
like tale ingesluit. 'n Vak op LG is slegs
toelaatbaar indien dit nie in die onderrig-
program vereis word nie

Vakke vereis: Wiskunde en Natuur- en
Skeikunde HG of SG

Keuring: Akademiese prestasie en per-
soonlike onderhoud indien nodig

Gelde: R160 - R315 per vak

Waar: Technikon Noord-Transvaal
Engelsmedium

**Nasionale Diploma in Siviele Inge-
nieurswese**

Duur: 6 semesters voltyds: 4 semesters
formele opleiding en 2 semesters erva-
ringsopleiding

Toetreekwalifikasie: Senior Sertifikaat
sonder universiteitstoelating (C-simbool
gemiddeld) OF die suksesvolle voltooiing
van die Potentiality Development Pro-
gramme OF N4 met ten minste 5 toepas-
like vakke

Vakke vereis: Senior Sertifikaat: Wis-
kunde (C-simbool), Natuur- en Skeikunde
en Engels. N4: Wiskunde (60%) en 'n
slaagpunt in Engels

Keuring: Aanlegtoetse

Nota: Die Potentiality Development Pro-
gramme is beskikbaar vir studente wie se
matrieksimbole nie aan die vereiste stan-
daard voldoen nie. 'n Senior Sertifikaat
sonder universiteitstoelating met 'n HG-
slaagpunt of 'n E-simbool in Wiskunde en
Natuur- en Skeikunde en 'n slaagpunt in
Engels, word vir toelating tot die program
vereis. 1993-inligting

Gelde: 1994: R360 per vak per semester

Waar: Kaapse Technikon
Afrikaans- of Engelsmedium

**Nasionale Diploma in Siviele Inge-
nieurswese**

Duur: 3 jaar voltyds: 2 jaar formele oplei-
ding en 1 jaar ervaringsopleiding

Toetreekwalifikasie: Senior Sertifikaat
sonder universiteitstoelating met ses vakke
op HG en/of SG

Vakke vereis: Afrikaans en Engels: Eerste
Taal op HG en die Tweede Taal ten minste
SG. Wiskunde SG (D-simbool) of HG (E-
simbool) of N4-Wiskunde (50%) en 'n
slaagpunt in Natuur- en Skeikunde

Keuring: Psigometriese toetse, aanleg-
toetse of persoonlike onderhoud

Gelde: Ongeveer R3000 - R6000,p.j.

Waar: M.L. Sultan Technikon
Engelsmedium

**Nasionale Diploma in Siviele Inge-
nieurswese**

Duur: 3 jaar voltyds: 2 jaar formele oplei-
ding en 1 jaar ervaringsopleiding

Toetreekwalifikasie: Senior Sertifikaat
sonder universiteitstoelating met vakke op
HG of SG

Vakke vereis: Wiskunde HG, Engels
Eerste Taal, Fisika of Natuur- en Skei-
kunde en/of Tegniese Tekene

Keuring: Meriete

Gelde: R3720 p.j.

Waar: Port Elizabethse Technikon
Afrikaans- en Engelsmedium

**Nasionale Diploma: Siviele Inge-
nieurswese**

Duur: 3 jaar voltyds: 24 maande formele
opleiding en 12 maande toepaslike erva-
ringsopleiding

Toetreekwalifikasie: Senior Sertifikaat
sonder universiteitstoelating en sonder
enige laergraadvakke

Vakke vereis: Eerste Taal HG (E-simbool)
of SG (D-simbool), Wiskunde en Natuur-
en Skeikunde

Keuring: Akademiese meriete

Gelde: R190 - R380 per vak

Waar: Technikon Pretoria

Afrikaans- of Engelsmedium

Nasionale Diploma: Ingenieurswese: Sivil

Duur: 3 jaar voltyds; 24 maande formele opleiding en 12 maande toepaslike indiensopleiding

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met 'n maksimum van twee vakke op LG. Die vakke op LG is slegs toelaatbaar indien dit nie in die onderrigprogram vereis word nie

Vakke vereis: Wiskunde en Natuur- en Skeikunde HG (E-simbool) of SG (C-simbool)

Keuring: Akademiese prestasie

Gelde: Eerste semester: R224 - R486 per vak; tweede semester: R254 - R452 per vak; derde semester: R398 - R428 per vak; vierde semester: R406 - R436 per vak

Waar: Technikon Witwatersrand

Afrikaans- of Engelsmedium

Nasionale Diploma: Ingenieurswese: Sivil

Duur: 3 jaar voltyds

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating

Vakke vereis: Eerste Taal HG (D-simbool), Tweede Taal HG (E-simbool), Wiskunde HG (D-simbool) en Natuur en Skeikunde

Vakke aanbeveel: Rekenaarwetenskap, Aardrykskunde

Keuring: Keuringstoets en persoonlike onderhoud (indien nodig)

Gelde: Ongeveer R760 per vak p.j. of ongeveer R380 per vak per semester

Waar: Technikon Natal

Afrikaans- of Engelsmedium

Nasionale Diploma: Ingenieurswese: Sivil

Duur: 3 jaar: 2 jaar formele opleiding en 1 jaar ervaringsopleiding

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met 'n minimum van 4 vakke op HG en/of SG, amptelike tale ingesluit. Vakke op LG is slegs toelaatbaar indien dit nie in die onderrig-

program vereis word nie

Vakke vereis: Engels Eerste Taal HG (E-simbool) of SG (D-simbool) of Engels Tweede Taal HG (C-simbool) of SG (B-simbool) en Wiskunde HG (E-simbool) of SG (D-simbool)

Keuring: Puntestelsel

Gelde: Eerste en derde jaar: R2640 per semester (R615 per vak)

Waar: Technikon Skiereiland

Afrikaans- of Engelsmedium

Nasionale Diploma in Siviele Ingenieurswese

Duur: 3 jaar voltyds; 24 maande formele opleiding en 12 maande toepaslike ervaringsopleiding

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating of NTS III

Vakke vereis: Wiskunde HG of SG vir Senior Sertifikaat. Wiskunde asook Eerste en Tweede Taal SG vir NTS III

Vakke aanbeveel: Houtwerk, Natuur- en Skeikunde, Tegniese Tekene

Keuring: Akademiese prestasie

Gelde: Ongeveer R115 - R236 per vak

Waar: Mangosuthu Technikon

Engelsmedium

Nasionale Diploma: Ingenieurswese: Sivil

Duur: 3 jaar: 4 semesters formele opleiding en 2 semesters ervaringsopleiding

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating

Vakke vereis: Engels, Wiskunde en 'n natuurwetenskapvak

Keuring: Kandidate word gekeur

Nota: Kandidate moet gewoonlik eers die Pre-tegniese kursus voltooi om tot die eerste jaar toegelaat te word

Gelde: R1960 per semester

Waar: Vaaldriehoekse Technikon

Afrikaans- en Engelsmedium

Nasionale Diploma: Ingenieurswese: Sivil

Duur: 3 jaar voltyds

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met ten minste 4 vakke op HG of SG OF N3 met 'n minimum van 4 vakke (minimum slaagpunt 50%)

Vakke vereis: Senior Sertifikaat: Wiskunde, Natuur- en Skeikunde en albei amptelike tale HG of SG. N3: Wiskunde en Ingenieurswetenskap (50%) plus Afrikaans en Engels op N3-vlak

Keuring: Puntestelsel

Gelde: Eerste semester: R2015; tweede semester: R2103; derde semester en vierde semester: R2027 per semester

Waar: Transkei Technikon

Engelsmedium

Nasionale Diploma: Siviele Ingenieurswese

Duur: 3 jaar voltyds (6 maande ervaringsopleiding ingesluit)

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating

Keuring: Kandidate word gekeur

Gelde: R3950 p.j.

SIVIELE INGENIEURSWESE: LANDBOU

Beroep(e): Siviele ingenieurstechnikus (Landbou)

Persoonlike vereistes: Vermoë om as deel van 'n span te werk, kreatief, goeie analitiese vermoëns, belangstelling in landbou-aktiwiteite en goeie kommunikasievermoëns

Aard van werk: Behels bedrywigheids soos die ontwerp van damme, dreineringsstelsels, besproeiingsstelsels (vloed en besprinkeling), water-afloopbeheer, erosiebeheer, veesuipingsstelsels, strukture ens.

Waar: Technikon OVS

Afrikaans- of Engelsmedium

Nasionale Diploma: Siviele Ingenieurswese: Landbou

Duur: 3 jaar voltyds: 2 jaar formele opleiding en 1 jaar ervaringsopleiding

Toetreekwalifikasie: Senior Sertifikaat

sonder universiteitstoelating met 'n minimum van 5 vakke op HG en/of SG, amptelike tale ingesluit. 'n Vak op LG is slegs toelaatbaar indien dit nie in die onderrigprogram vereis word nie

Vakke vereis: Wiskunde en Natuur- en Skeikunde HG of SG

Keuring: Akademiese prestasie en persoonlike onderhoud indien nodig

Gelde: R160 - R315 per vak

Waar: Technikon Pretoria

Afrikaans- of Engelsmedium

Nasionale Diploma: Siviele Ingenieurswese: Landbou

Duur: 3 jaar voltyds: 24 maande formele opleiding en 12 maande toepaslike indiensopleiding

Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met 'n maksimum van twee vakke op LG. Die vakke op LG is slegs toelaatbaar indien dit nie in die onderrigprogram vereis word nie

Vakke vereis: Wiskunde en Natuur- en Skeikunde HG (E-simbool) of SG (C-simbool)

Vakke aanbeveel: Meganika en Tekene

Keuring: Akademiese prestasie

Gelde: Eerste semester: R372 - R418 per vak;

tweede semester: R384 - R450 per vak;

derde semester: R384 - R464 per vak;

vierde semester: 4 vakke @ R394 per vak

STADS- EN STREEKBEPLANNING

Beroep(e): Stads- en Streekbeplanningstechnikus

Persoonlike vereistes: Kreatief, drie-dimensionele vermoëns, goeie visuele persepsie en die vermoë om effektief te kommunikeer

Aard van werk: Werk as een van 'n span (bestaande uit ingenieurs, argitekte, geoloog, landmeters, ekonome, landskapsargitekte en sosiale wetenskaplikes) in die ontwikkeling en beplanning van verbylv, werksplekke en ontspanningsfasiliteite. Werk behels onder andere opmeting, op-

names, voorstelling van data deur middel van kaarte, grafieke en die konstruksie van skaalmodelle vir voorgestelde skemas

Waar: M.L. Sultan Technikon
Engelsmedium

Nasionale Diploma: Stads- en Streekbeplanning

Duur: 3 jaar voltyds: 2 jaar formele opleiding en een jaar toepaslike indiensopleiding
Toetreekwalikasie: Senior Sertifikaat sonder universiteitstoelating met vakke op HG en/of SG

Vakke vereis: Wiskunde HG; Engels (Eerste Taal) en Afrikaans of 'n ander taal
Gelde: R3720 per jaar of R1860 per semester

Waar: Technikon Witwatersrand
Afrikaans- of Engelsmedium

Nasionale Diploma: Stads- en Streekbeplanning

Duur: 3 jaar

Toetreekwalikasie: Senior Sertifikaat sonder universiteitstoelating of N3

Vakke vereis: Eerste Taal HG (E-simbool), Tweede Taal SG (D-simbool) en Wiskunde HG (E-simbool) of SG (D-simbool) vir Senior Sertifikaat. Vir die N3 Sertifikaat 'n gemiddeld van 60% met minstens 55% in Wiskunde, Ambagstorie, Boukunde en Boutekene asook Eerste Taal HG (E-simbool) en Tweede Taal SG (D-simbool)

Vakke aanbeveel: Aardrykskunde

Keuring: Keuringstoets

Gelde: 6 vakke @ ongeveer R760 elk p.j. of R380 elk per semester

Waar: Kaapse Technikon
Afrikaans- of Engelsmedium

Nasionale Diploma: Stads- en Streekbeplanning

Duur: 3 jaar voltyds: 18 maande formele opleiding en 18 maande toepaslike indiensopleiding

Toetreekwalikasie: Senior Sertifikaat sonder universiteitstoelating (ses vakke op HG en/of SG)

Vakke vereis: Eerste Taal HG en Tweede Taal SG; Wiskunde SG (D-simbool) of HG (E-simbool) of N3-Wiskunde (70%) of N4-Wiskunde (60%)

Keuring: Psigometriese toetsing en/of aanlegtoets en/of 'n persoonlike onderhoud

Gelde: Ongeveer R3000 - R6000 p.j.

STEENKOOLMYNBOU

Beroep(e): Mynboutegnikus

Persoonlike vereistes: Fisies aktief, vermoë om ondergronds te werk, by verandering aan te pas en met mense van alle rassegroepe saam te werk

Aard van werk: Is in beheer van 'n produksie-eenheid, pas die teorie in die praktyk toe en neem verantwoordelikheid t.o.v. myntoerusting, plofstowwe, rotsstabiliteit, verkoeling, vervoer van erts, ens.

Waar: Technikon Witwatersrand

Afrikaans- of Engelsmedium

Nasionale Diploma: Steenkoolmynbou

Duur: 3 jaar voltyds (ervaringsopleiding ingesluit)

Toetreekwalikasie: Senior Sertifikaat sonder universiteitstoelating

Vakke vereis: Wiskunde HG (E-simbool) of SG (D-simbool)

Vakke aanbeveel: Natuur- en Skeikunde
Bykomende vereistes: 'n 'Rooikaart' van die Mediese Buro vir liggaamlike geskiktheid word vereis

Keuring: Meriete en onderhoude

Nota: 'n Pre-tegnisiprogram word aangebied vir persone wat nie aan die minimum toelatingsvereistes voldoen nie

Gelde: Ongeveer R480 per vak

Waar: Technikon SA

Afrikaans- of Engelsmedium

Nasionale Diploma: Steenkoolmynbou

Korrespondensie-kursus;

Duur: 3 jaar

Toetreekwalikasie: Senior Sertifikaat sonder universiteitstoelating met 'n maksimum van twee vakke op LG (die twee amptelike tale mag nie op LG wees nie)

Vakke vereis: Wiskunde
Vakke aanbeveel: Chemie, Fisika
Bykomende vereistes: Werksaam in 'n myn of 'n mynboueroep
Gelde: R430 per vak

TELEKOM

Waar: Technikon SA
Afrikaans- en Engelsmedium
Nasionale Diploma: Telekom
Korrespondensie-kursus
Duur: Hierdie is nie 'n volledige diploma-kursus nie. Slegs die vakke Wiskunde I, II en III van die Nasionale Diploma: Telekom word aangebied
Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met 'n minimum van vier vakke op SG of HG (die amptelike tale mag nie op LG wees nie)
Gelde: R390 per vak

WEERKUNDE

Beroep(e): Weerkundige tegnikus
Persoonlike vereistes: Oplettendheid, akkuraatheid en vermoë om onafhanklik te werk
Aard van werk: Verskaf weervoorspellings aan die media, lug- en skeepvaart, ens.. Inligting i.v.m. temperature, atmosferiese druk, wolke, sigbaarheid ens. moet noukeurig versamel en saamgestel word en die weerkundige apparaat moet instand gehou word

Waar: Technikon Pretoria
Afrikaans- en Engelsmedium
Nasionale Diploma: Weerkunde
Duur: 3 jaar voltyds: 2 jaar formele opleiding en 1 jaar toepaslike ervaringsopleiding
Toetreekwalifikasie: Senior Sertifikaat sonder universiteitstoelating met 'n maksimum van twee LG-vakke. Vakke op LG is slegs aanvaarbaar indien dit nie in die onderrigprogram vereis word nie
Vakke vereis: Wiskunde en Natuur- en

Skeikunde HG 40% of SG 50%
Bykomende vereistes: Slegs studente in diens van die Departement van Omgewingsake, die weerdienste van die TBVC-lande en Namibië word aanvaar
Keuring: Toelating aan keuring onderworpe
Gelde: Eerste bywoning: R254 - R480 per vak; tweede bywoning: R370 - R422 per vak; derde bywoning: R190 - R642 per vak; vierde bywoning: R190 - R850 per vak; vyfde bywoning: R370 en sesde bywoning R380 vir prakties

INDEKS VAN BEROEPE

BLADSY

Bedryfsingenieurstechnikus	36
Bedryfsingnieur	32
Chemiese ingenieur	32
Chemiese ingenieurstechnikus	37
Elektriese ingenieur	32
Elektriese ingenieurstechnikus	39
Elektroniese ingenieur	32
Geoteknikus (Ekonomies)	39
Houtproduksie-ingenieurstechnikus	43
Kartograaf	43
Landbou-ingenieur	32
Landmeter	34
Lugvaartingenieur	32
Materiale ingenieur	32
Meganiese ingenieur	32
Meganiese ingenieurstechnikus	44
Metallurgiese ingenieur	32
Metallurgiese ingenieurstechnikus	39, 47
Mynbou-ingenieur	32
Mynbouteknikus	47, 52, 56
Mynopmetingstechnikus	48
Opmetingstechnikus	50
Siviele ingenieur	32
Siviele ingenieurstechnikus	52
Siviele ingenieurstechnikus (Landbou)	55
Stads- en streekbeplanner	34
Stads- en Streekbeplannings- teknikus	55
Teknikus (Nie-vernietigende toet- sing)	50
Weerkundige	35
Weerkundige teknikus	57

APPENDIX/BYLAE

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