

THE CAREER PATH

Secondary education:

Compulsory subjects: a Senior Certificate with Mathematics, Science and your first language on higher grade

Recommended subjects: English, Afrikaans, Computer Science, Geography

Tertiary education and experiential training

i) **Professional Engineer** – innovative, holistic approach, manager/leader of the team, conceptual thinker

4 years BSc (Civil Engineering) degree at a University plus a minimum of 3 years practical experience

ii) **Professional Technologist** – applied technology, transferring ideas into practise

3 years National Diploma at a Technikon plus one year minimum study to obtain a BTech degree in civil engineering at a Technikon

iii) **Registered Technician** – practical, hands-on, technical

3 years National Diploma at a Technikon

SAICE



Bridging the gap

If you still have SPECIFIC questions, please write to, or call:

The President

Engineering Professions Association of Namibia

P O Box 21885

Windhoek

Mr G Seydack, tel./fax: (061) 222 313

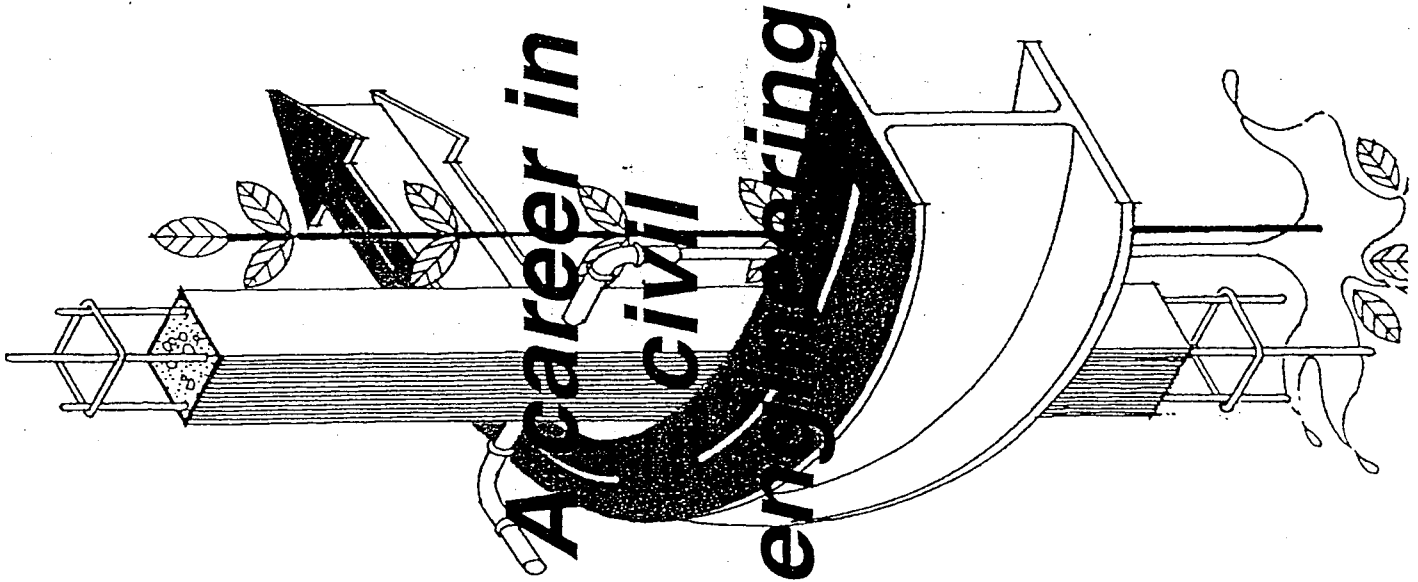
or Ms C Kutz, tel./fax (061) 223 009

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The South African Institution of Civil Engineering

P O Box 93495

Yeoville, 2143



WHAT IS CIVIL ENGINEERING?

Since early times man has built shelters, bridges, roads storage structures and furrows. In most cases these were primitive in form, but were nevertheless civil engineering projects conceived and built with ingenuity. The role of the civil engineering profession is to conceive, design and construct new projects, to maintain existing facilities, to ensure a cost-effective life span of projects, to ensure sustainable development, to always consider and anticipate the basic needs of the community and to provide for these needs.

WHAT DOES THE JOB CONSIST OF?

The Civil Engineer plans, designs and builds the required facility. The engineer will:

- * examine the site and likely impact on the environment
- * carry out necessary technical analysis and design
- * communicate with the client, the community and other interested parties to ensure that needs, expectations and concerns are addressed adequately
- * supervise the preparation of plans and details
- * evaluate all the financial requirements
- * plan and execute the construction
- * ensure that the required standards of quality are met and
- * monitor performance and maintenance

The Technologist will

- * undertake work where engineering principles are applied in a well recognised or standard manner
- * do many of the tasks performed by professional engineers, accepting responsibility for their work may also be in private practise.

The Technician will make the practical contribution to the civil engineering team responsible for translating the ideas and calculations of the professional engineer to workable schemes in design

- * understand and apply standard engineering techniques
- * assumes a management role over artisans on construction
- * may be concerned with laboratory testing which ensures quality control

THE BRANCHES OF CIVIL ENGINEERING

An extensive field of interest or specific branches of civil engineering exist, eg.:

Structural:

bridges, buildings, towers, power pylons

Transportation:

roads, traffic control, public transport, airports

Water:

dams, pipelines, purification works, reservoirs, sewage purification, storm water management

Geotechnical:

foundations, excavations and fills, rock anchors and piling, tunnels

Urban:

municipal services and facilities, development and maintenance of towns, recreational facilities

Railway and Harbour:

railway networks, facilities in harbours, coastal structures

Environmental:

impact studies, social and natural environments, harmonising affected elements and resources

Information:

capture, transmission and storage of data, use of computers in civil engineering design, communication and reports

HOW DO YOU KNOW THAT YOU ARE SUITED FOR CIVIL ENGINEERING?

If you are someone who:

- * has mathematical ability
- * can think logically
- * is keen on a career which combines outdoor life and office work
- * is environmentally conscious
- * is interested in improving the quality of life
- * can make decisions independently
- * can communicate verbally and graphically
- * can face challenges with confidence and
- * can work and study systematically,

Then civil engineering is for you !!!!

JOB OPPORTUNITIES

- * Municipalities
- * Government Departments
- * Consulting Practices
- * Contracting Firms
- * Educational Institutions
- * Research

REMUNERATION

Remuneration is above average in relation to other professional pursuits, but varies according to the sector of employment and the economic cycles of the country.