

Career Profile: Civil Engineering Technician

A civil engineering technician assists in the study, design, construction and maintenance of large building projects. Construction projects are many and varied and include multi-storey buildings, roads, bridges, harbours, airports, sport stadiums and water and sewage purification plants. The technician works closely with civil engineers, technologists and construction teams. The work is very practical and demands a good knowledge of building materials and standards and a mastery of technical skills which are relevant for the area of specialization. The work is demanding but creative, rewarding and the results are long lasting.

Education Requirements

National Senior Certificate (NSC)

For a career in mechanical engineering students are advised to select English, Mathematics, and Physical Science and to add to this a selection from the designated subjects. These are subjects that are particularly suitable for tertiary study.

Students who study at an FET College must ensure that they take the appropriate subjects that will enable them to continue their studies at a University of Technology.

National Diploma / BTech

The National Diploma is a three year course which includes gaining practical experience under the guidance of a professional engineer. The diploma is a pre-requisite for admission to a Bachelor of Technology – Btech.

Offered at:

- [Tshwane University of Technology](http://www.fe.tut.ac.za/)¹ (Faculty of Engineering and Built Environment)
- [University of Johannesburg](http://www.uj.ac.za/study/AcademicCourses/EngineeringTheBuiltEnvironment/NDipCivilEngineering/tabid/8581/Default.aspx)² (Civil Engineering)
- [Vaal University of Technology](http://www.vut.ac.za/metadot/index.pl?id=2369&isa=Category&op=show)³ (Civil Engineering)
- [UNISA](http://www.unisa.ac.za/Default.asp?Cmd=ViewContent&ContentID=19771)⁴ (Civil engineering)

Specializations Offered:

There are no specializations at diploma level but there are at the BTech level.

¹ <http://www.fe.tut.ac.za/>

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<http://www.uj.ac.za/study/AcademicCourses/EngineeringTheBuiltEnvironment/NDipCivilEngineering/tabid/8581/Default.aspx>

³ <http://www.vut.ac.za/metadot/index.pl?id=2369&isa=Category&op=show>

⁴ <http://www.unisa.ac.za/Default.asp?Cmd=ViewContent&ContentID=19771>

Tshwane University of Technology

National Diploma: Civil engineering

B-Tech: Civil engineering

University of Johannesburg

National Diploma: Civil engineering

B-Tech: Construction management, Environmental engineering, Geotechnical engineering, Structural engineering, Transportation engineering, Urban engineering, Water engineering

Vaal University of Technology

National Diploma: Civil engineering

B-Tech: Civil engineering

UNISA (Florida campus)

National Diploma: Civil engineering

B-Tech: Construction management, Environmental engineering, Geotechnical engineering, Structural engineering, Transportation engineering, Urban engineering, Water engineering

Admission Requirements

As admission requirements vary from one institution to another, find out what the specific requirements are by checking on the website and contacting the university if you have any queries.

Registration as a professional engineering technician

The purpose of professional registration is to ensure that only properly qualified people influence the health and safety of the population. Therefore, while registration is not compulsory, many tasks can only be performed by people registered at an appropriate level for the task.

A person who has obtained a National Diploma in Engineering is eligible for registration as Candidate Engineering Technician. After gaining at least 3 years of appropriate practical experience a civil engineering technician may qualify as a Professional Engineering Technician under the auspices of the Engineering Council of South Africa.

Possible Employers

- Government
- [Transnet](http://www.transnet.co.za/)⁵
- [Eskom](http://www.eskom.co.za/)⁶

⁵ <http://www.transnet.co.za/>

⁶ <http://www.eskom.co.za/>

- [Iscor](#)⁷
- Municipalities
- Universities
- Manufacturers
- Engineering consultants

The registered engineer with the necessary experience and initiative can work as consultant for any of the above-mentioned companies and organisations.

Find out more

Find out more about civil engineering, bursaries and jobs:

- [The South African Association of Consulting Engineers](#)⁸ will enable you to get some idea of how engineering consultants are organised.
- [The South African Institution of Civil Engineering \(SAICE\)](#)⁹, has a number of useful services and publications. Among them are CPD giving information on continuous professional development, and it is possible to view back issues of the [Civil Engineering Magazine](#)¹⁰.
- [The South African job board and recruitment portal](#)¹¹ for the South African engineering industry.

⁷ <http://www.iscor.co.za/>

⁸ <http://www.saace.co.za/>

⁹ <http://www.civils.org.za/>

¹⁰ <http://www.civils.org.za/Publications/CivilEngineeringMagazine/MonthlyIssues/tabid/84/Default.aspx>

¹¹ <http://www.engineeringcareers.co.za/>

Are you suited to this career?

This quick quiz can help you to identify whether you are suited for this occupation. The questions are based on interests, characteristics and values typical of people who work as engineers.

Quiz	Yes	No
Do you enjoy Mathematics and Science?		
Are you good at analysing problems and finding solutions?		
Do you want a career that makes extensive use of science and technology?		
Can you think creatively and come up with original ideas?		
Are you flexible and can you adapt easily to a variety of work situations?		
Can you communicate clearly?		
Do you work well with other people?		
Do you have good health and physical stamina?		
Do you want to participate in projects that will benefit the long term development of the country?		

If you have mainly yes answers it may be an indication that this is an occupation to consider.