

# Career Profile: Industrial Engineering Technologist

Industrial engineering technologists are involved in developing well organized work systems that make efficient use of people, materials, and machines in shops, factories, and offices. Technologists are at the interface between industrial engineers and industrial technicians in designing and implementing methods and facilities that improve productivity, achieve quality products and contribute to workplace safety. Technologists usually work in teams in order to solve problems dealing with work location, the layout of a plant or office, the flow of materials, the planning and control of production, the safety of workers and quality assurance. They work in a wide variety of fields and industries including manufacturing, mining, transportation, medical care, commerce and government.

## Education Requirements

### National Senior Certificate (NSC)

For a career in industrial 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

#### Offered at:

- [Tshwane University of Technology](http://www.fe.tut.ac.za/)<sup>1</sup> (Faculty of Engineering and Built Environment)
- [University of Johannesburg](http://www.uj.ac.za/Default.aspx?alias=www.uj.ac.za/industech)<sup>2</sup> (Department of Industrial Engineering Technology)
- [Vaal University of Technology](http://www.vut.ac.za/metadot/index.pl?id=2371&isa=Category&op=show)<sup>3</sup> (Industrial Engineering)
- [University of South Africa](http://brochure.unisa.ac.za/brochure/showprev.aspx?d=l_4_26&f=p_BTENI)<sup>4</sup> (College of Science, Engineering and Technology)

#### Specializations offered:

No specializations are indicated.

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<sup>1</sup> <http://www.fe.tut.ac.za/>

<sup>2</sup> <http://www.uj.ac.za/Default.aspx?alias=www.uj.ac.za/industech>

<sup>3</sup> <http://www.vut.ac.za/metadot/index.pl?id=2371&isa=Category&op=show>

<sup>4</sup> [http://brochure.unisa.ac.za/brochure/showprev.aspx?d=l\\_4\\_26&f=p\\_BTENI](http://brochure.unisa.ac.za/brochure/showprev.aspx?d=l_4_26&f=p_BTENI)

## Admission requirements

The standard admission requirement for the BTech is a relevant National Diploma.

## Registration as a professional industrial engineering technologist

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 recognised BTech degree is eligible for registration as Candidate Engineering Technologist. After gaining at least 3 years of appropriate practical experience a mechanical engineering technologist may qualify as a Professional Engineering Technologist under the auspices of the Engineering Council of South Africa.

## Possible Employers

- Government departments
- Municipalities
- Hospitals
- Universities
- [Transnet](#)<sup>5</sup>
- Mines
- [IsCOR](#)<sup>6</sup>
- [Sasol](#)<sup>7</sup>
- [AECI](#)<sup>8</sup>
- Explosives and Chemical Industries
- [ArmSCOR](#)
- The registered engineer with the necessary experience and initiative can work as consultant for any of the above-mentioned companies and organisations. A number of industrial engineers have set up their own consultancies.

## Find out more

Find out more about industrial engineering, bursaries and jobs:

- [South African Institute for Industrial Engineering](#)<sup>9</sup>

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<sup>5</sup> <http://www.transnet.co.za/>

<sup>6</sup> <http://www.iscor.co.za/>

<sup>7</sup> <http://www.sasol.co.za/>

<sup>8</sup> <http://www.aeci.co.za/>

<sup>9</sup> <http://www.saiie.co.za/>



- [The South African Association of Consulting Engineers](#)<sup>10</sup> will enable you to get some idea of how engineering consultants are organised.
- The [South African job board and recruitment portal](#)<sup>11</sup> for the South African engineering industry.

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<sup>10</sup> <http://www.saace.co.za/>

<sup>11</sup> <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
Are you good at Mathematics and Science?		
Are you curious and creative?		
Do you enjoy practical tasks?		
Do you approach tasks in an orderly and systematic way?		
Are you able to work well with other people?		
Are you an accurate observer?		
Are you able to combine a number of different perspectives?		
Can you communicate clearly both orally and in writing?		
Do you find it easy to accept responsibility?		
Are you interested in a career that helps you to become involved in improving the way people work?		

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