**Careers in Engineering Technology**

After graduating with your BEngTech degree, you will find employment relevant to your studied discipline. To fully develop your career opportunities, you must register with the Engineering Council of South Africa (ECSA) as a candidate Professional Engineering Technologist.

Professional registration as a Professional Engineering Technologist can take place after 4 years of suitable and documented Initial Professional Development (IPD) in your work place. Professional registration as a Professional Engineering Technician can take place after 3 years of suitable and documented Initial Professional Development (IPD) in your work place.

Once registered with ECSA, professionals must maintain their status by ensuring Continuous Professional Development (CPD) through, among others, the attendance of relevant short courses.

**Civil Engineering**

The Civil Engineering technologist focuses on the design, construction, and maintenance of public and private sector infrastructure and may be employed by the public or private sector such as governmental agencies, municipalities, construction companies and consultants

These technologists may be involved in many fields of Civil Engineering such as transportation, water and wastewater treatment, buildings, public facilities such as airports and train stations, and industrial construction projects. A Civil technologist must be able to design safe infrastructure which meets relevant codes of practice in the regions where they are constructed. This infrastructure must be designed with maintenance, efficiency, and other economic concerns in mind as well so as to ensure that they will endure many years of use.

Civil engineering is a very exciting and rewarding field, especially in regions which are integrating cutting edge technology and design techniques into new designs.

**Electrical Engineering**

Electrical technologists are responsible for the design, development, manufacturing, testing and maintenance of electrical, electronic and digital infrastructure. This includes, but is not limited to power generation, transmission and distribution systems, control systems, computer systems, data and voice communication systems, automated robotic systems and medical technologies.

Graduates in Electrical technology change and improve life by combining electrical, electronic and digital technologies with creativity, taking ideas and turning them into reality. Electrical Engineering technology graduates are not limited to formal employment areas – they also make good entrepreneurs! Apart from this, they may also find challenging opportunities in teaching and/or research.

Typical sectors of opportunities for employment include power generation, transmission and distribution corporations as well as government institutions developing infrastructure, computer-technology corporations, manufacturing plants, parastatal and private communication companies as well as process-control and chemical plants.

**Industrial Engineering**

Industrial Engineering technologists develop concepts, designs and systems for manufacturing processes and services. They work with many different specialists like material scientists, engineers, manufacturing and services team leaders, marketers and accountants to develop new efficient processes, quality assurance protocols and systems. Industrial engineering technologists are tasked to ensure that manufacturing plant or services rendered are optimally designed for customer satisfaction in terms of quality as well as being internationally competitive.

These technologists create computer renderings with 3-dimensional CAD programs to visualise and simulate design concepts. Industrial engineering technologists are high in demand in automated manufacturing and assembly plants as well as in large scale service industries

**Marine Engineering**

Marine engineering technologists apply electrical and mechanical as well as information technologies to systems designed to operate in predominately aquatic environments.

The scope of work covers all types of marine propulsion systems, pumps, navigational and communication devices, rigging, tools foul-weather gear and safety equipment of seafaring vessels and also includes harbors, dockyard facilities, oil platforms and ship building facilities.

Marine engineering technologists ensure the efficient and safe operation of an ever growing large scale international transportation system. Another career avenue of a Marine Engineering Technologist (Naval Architecture) is the design, construction and maintenance of ship, yachts, leisure vessels (or the components) for operation in the sea or maritime environment.

**Mechanical Engineering**

The work of Mechanical technologists spans numerous fields and disciplines, with emphasis on the creation, design, construction, installation and maintenance of mechanical components, structures and devices that enables modern living like heating, ventilation and air conditioning systems for buildings. Product development requires the adaptation or refinement of existing vehicle-, machine- or mechanical components, or the process used to produce them, for further mechanical optimization or cost reduction to benefit the consumer and also improving the international competitive edge of the manufacturer.

**Conclusion**

Engineering is a stimulating career, as some of the most important technological innovations of the last century can be directly attributed to engineering teams whose creativity and vision often helped to make the impossible become a reality within a short number of years.

In general, technologists may also choose to become entrepreneurs or to use their skills in a military career. Some technologists choose to work as consultants or branch off into non-engineering positions.