

# Why I wanted to be an Engineer

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The engineering profession is one of the most diverse fields in the world. Few other terms manage to encapsulate all aspects of life in the way engineering does. And this is but one reason that makes engineering such an amazing choice. No matter what your interests in life are, there is a job in engineering for you.

And as the world develops, so does engineering adapt to the world. Whether it's by the altering of current speciality areas or the development of new fields, an engineer is sure to be involved.

Engineering is all about understanding the way things work. Whether it be the internals of a computer, or the organisational structure of a business. It's a love of finding solutions

To say that the world as we know it today wouldn't be the same without engineers may sound vain, but at the same time it's very true. Engineering allowed the world to explode to the over seven billion people that inhabit it today. It provided homes for them, clean water in their houses, allowed everyone to communicate with each other and to travel around the world in a day. It has improved the lives of every person on Earth.

Engineering is more than just maths and science. Although these two subjects are core to the profession, engineering is a way of thinking, a way of life. Maths and science are tools one uses to apply to problems, but to figure out what the problem is, requires a special mind.

Although Maths and Science are integral parts of Engineering, one mustn't feel that that's all you're going to be doing for the rest of your life. It's required because it displays an understanding. Unless one plans to go into heavy research areas, the maths is fairly limited. And the more one works, the more of an intuition one develops in such areas. One must remember that the skills of an artisan and the pride he takes in his work, is of equal

importance to the man who developed the design, as the one would not be possible without the other.

Engineering is not an easy course. But that is why our universities and technikons are producing engineers of a world-class standard. It's why international companies like Mercedes-Benz, BMW, Toyota and other car manufacturers all have production units here in South Africa and are continuously investing in the economy.

In a developing country like South Africa, an engineer's presence is even more critical. Problems are often unique to a certain area, more so than in first world countries, where generic solutions can be found. It allows for the design of systems from scratch. It means there is the opportunity to make use of the latest technology to ensure that a system is well built. That infrastructure is capable of today and tomorrow's needs. And that good maintenance structures are put in place to ensure it lasts a lifetime.

Engineering is an opportunity to make a difference. Research opportunities are abound in South African learning centres. The government offers funding for such projects via the national Research Foundation, and many businesses also provide bursaries for students who are interested in studying further. And like everything in engineering, you are not bound to one field.

Projects like the Square Kilometre Array planned for South Africa, have the opportunity to provide more than just information. They provide jobs and allow for innovation that would otherwise not have taken place. Industrial Development Zones are being constructed around the country to encourage local production and export. Further trade agreements within the AU and the inclusion of South Africa in BRICS ensure a strong future for industry. This directly impacts the demand for engineers.

Green- and Sustainable Engineering are fields which have recently drawn a lot of attention. As people become more concerned about the effect they have on the environment, they feel they should start doing something about it. Being an engineer gives one an opportunity to create change from the beginning, from the design phase.

Since the early 80s, engineering organisations in the country have been working to promote engineering as a profession, especially in previously disadvantaged communities. The South African Institute for Civil Engineers specifically sponsors competitions such as their popular bridge building competition to encourage engineering thinking. The Engineering Council of South Africa last year announced the start of its Engenius initiative to promote the field of engineering in South Africa. This was largely to help meet government and

industry's demand for 30 000 new engineers by 2014. Further reaffirming the need for engineers in South Africa.

Majority of big organisations in South Africa offer full bursaries to students studying towards an engineering degree. Companies like Anglo American, Sasol and Eskom, even banking organisations offer bursaries to engineers, as an engineer's way of thinking is of equal importance as his specific skill set is, and thus advantageous to any company.

The funding made available, and efforts of local organisations in education means that engineering is within the grasp of anyone who truly wishes to pursue the field.

Engineering is an amazing profession, offering opportunities around the world and with the ability to give back to humanity. Mr David Botha, recently awarded the 2011 NSTF-BHP Billion Award for Management and Related sciences, Engineering and Technology Activities over the last five to ten years, relayed a story about an old town engineer, Erik Hall. When asked what he would have been had he not studied to be a Civil Engineer, he responded with "I would have been ashamed". This just goes to evidence the level of pride one can have in being involved in the engineering profession.