

## WHY I WANT TO BE A PROFESSIONAL ENGINEER

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Engineering is an interesting, challenging and rewarding profession. Engineers are in a powerful position to be able to change the world, using their dedication and skills. An ideal career is one which I will find enjoyable and interesting and one through which I can benefit others. There is a high demand for engineers. To be recognised as a Professional Engineer is also a way of ensuring a rewarding career, and the acknowledgement of skills anywhere in the world.

Engineering is a very broad field and there are many definitions. At a basic level engineers design, develop or build structures, machines, materials or systems to achieve a goal. It is also necessary to predict the way these designs will work or react to stresses. An engineer must also consider safety factors and the economics of the project.

For a young person considering the future there may seem like a bewildering variety of career options. Engineering is generally less understood by the public than other careers. The work of engineers may go unnoticed and unlike many professionals most people do not have regular contact with an engineer as they go about their lives. This certainly does not mean however that engineering is not of utmost importance.

The world today faces many challenges; growing awareness of the importance of the environment has shown that current lifestyles are using resources at an unsustainable rate and causing long term and serious environmental effects. There is an urgent need for innovation, new designs and processes are needed in order to ensure humans are able to live prosperously and sustainably. Engineers have a large role to play in this transition.

In less developed countries there is a lack of basic infrastructure such as roads and water treatment. The lack of this infrastructure hinders growth and development. Engineering has a key role to play as a driver of development, leading towards a more equitable world.

Even at a more local level there is need for the upgrade of much existing infrastructure especially as cities continue to grow. From a wider perspective, not just civil projects, the work carried out by engineers in many different specialisations can help to ensure economic growth and even directly improve the quality of people's lives or health.

A career in engineering appeals to me for a variety of reasons; the main three of these would be the ability to be engaged in interesting work, to be working on projects of relevance to society, and the ability to make a difference, as clichéd as this may seem. In order for a job to be interesting it must be challenging, so that I am working to the extent of my capabilities. There must also be the possibility for change and to work on a variety of different projects, not to be doing the same thing every day. These are options which engineering provides.

Much is made of the fact that young people today will have many different jobs in the course of their lifetime. But there is such scope within the work carried out by professional engineers that I know it is a qualification that will be relevant for a lifetime. The world today is a rapidly changing place, it is a positive therefore that engineering relies on skills which are highly transferrable, not just knowledge which may become outdated. A successful engineer therefore, should be constantly seeking to extend their knowledge. This is a characteristic of mine.

Engineering involves problem solving, creativity and ingenuity. These are all skills which make the engineers work valuable, and these are skills which I believe I possess. Engineers are also frequently engaged as managers, requiring leadership skills and an ability to interact with people. These are skills I possess and have developed.

As well as certain skills, a level of scientific knowledge, understanding of science and mathematics are also often necessary for a job in the engineering profession. Indeed many students choose engineering as an option where they can combine an interest in science with a level of practical relevance. Mathematics, Physics and Chemistry are all subjects which I have studied intently at college and excelled in.

Engineering is a highly respected profession around the globe. One of the reasons for this, besides the work that engineers themselves carry out, is that to be a Professional Engineer requires accreditation, by a body such as IPENZ. This ensures engineers are reliable and competent. It also has great benefits for engineers as well as clients. An engineering degree is recognised worldwide; furthermore IPENZ provides opportunities for networking and professional development, invaluable tools for a successful career.

Finally, the need for engineers, as explained above, means that professional engineers are in demand. The demand for engineers is highly likely to continue into the future. This means that an engineering graduate can be confident of finding a good job when they complete their degree.

I am confident that in starting upon the path to becoming a professional engineer I have made an excellent choice of career. It is a choice which will suit me well and lead to employment which I enjoy. Furthermore, I wish to be a professional engineer for the chance it gives me to help others. It is a career that is immensely relevant in today's world.

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