

## Things to consider

Training to become an engineer is hard work. A solid foundation in Calculus based mathematics and Physics will facilitate your transition into this area.

To be a successful engineer, be open to continual learning and self-improvement. Technology keeps evolving and people who are agile are more likely to thrive.

Not surprisingly, engineering can be very fulfilling work. It accords you the ability to solve problems that you are passionate about. In this age of entrepreneurship, engineers are best placed to start up lucrative businesses and influence change in meaningful ways. All the world's great economies owe their success to manufacturing sectors. Be the change you want to see!

## Engineering in Cameroon

Have you considered a career in engineering? Cameroon needs engineers to truly emerge as a developed country and there are various ways you can engineer in Cameroon....

Oil companies like Halliburton, Schlumberger, and Baker Hughes (based in Douala) need a wide range of skilled engineers to accomplish their missions and thus hire petroleum, mechanical, marine, and electrical engineers amongst others. Chemical engineers also play a large role in the oil refining process at SONARA (Limbe) as well as in the cement industry where *Dangote Cement*

(Douala) is a big player. Infrastructure work, such as road construction, the Chad-Cameroon pipeline and bridge construction is handled mainly by civil engineers while ENEO predictably hires a large number of electrical engineers. It should be noted that there is often an overlap as one company may need several differently skilled engineers, and one sort of engineer might be useful a variety of industries. While working for any these companies would be great, they certainly are not the only route to a career in engineering.

The best thing about being an engineer is being a trained problem solver. You can always begin your engineering career by identifying individual problems in your community and working to come up with solutions for them. The most fulfilling and potentially lucrative careers in engineering stem from practicing engineering to solve everyday problems. For instance, the *Cardiopad* is a touchscreen medical tablet that allows heart examinations to be carried out locally and the results sent to specialists who can interpret them. It was developed by a young Cameroonian engineer, Arthur Zang, with the aim of addressing the limited number of specialists in the country. Similarly, Alain Nteff, a 20 year old Cameroonian was alarmed by the high death rate of mothers and newborn babies and developed a mobile app, *Gifted Mom*, to address the problem.

Thinking about a career as a Cameroonian engineer? There is a lot to be addressed; purifying water to reduce disease, proper drainage systems to avoid breeding ground for pests, using recyclable and/or cheap materials for road construction and other manufacturing (household items like soap, toilet paper etc.).

We need a new generation of engineers to provide cheap and effective solutions to our everyday problems. Our next hero could be you.



# Engineering Is it for you?

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For **Better Breed Cameroon**

## Engineering. For Me?

Engineers are generally concerned with using Maths and Science to innovate –create solutions for the problems that plague society. By that token, it is one of the best ways to contribute to one's community, as trained engineers are not only able to identify problems but are also equipped to solve them.

In Cameroon, there are several locations where engineers are trained.

- ◆ Ecole Nationale Supérieure Polytechnique de Yaounde
- ◆ Faculty of Engineering and Technology of University of Buea
- ◆ IAI Cameroun (Yaounde)
- ◆ IFTIC-SUP (Yaounde)
- ◆ PK Fokam (Yaounde)
- ◆ Faculte de Genie Industriels (Douala)
- ◆ Catholic University of West Africa (Yaounde)
- ◆ Catholic University Institute of Buea

While this list is by no means exhaustive, it should act as a basal resource for prospective engineers. The length of the program depends on the nature of the degree awarded. Polytech, for example awards a Master's degree after 5 years. This is in contrast to the Engineering Faculty at UB where a Bachelor's degree is earned in 4 years.

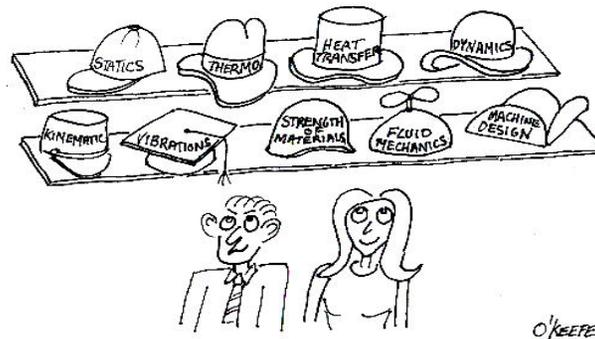
Which One is Right? For Me.

As societies evolve and their needs change, new branches of engineering are introduced accordingly.

One can think of several types of engineering, here are seven major subsets or groups.

**Electrical engineers** exploit the conversion of energy to various forms for use in different applications. These include converting hydro, solar, and/or wind energy to electrical energy. They also design electronic components for cars, houses etc. and can contribute in the fields of telecommunication and networking as computer engineers. Computer, robotics, and mechatronic (combination of electronics and mechanics) engineering are areas which are expected to grow in the next few years. .

**Mechanical engineers** design mechanical systems for a wide range of applications –manufacturing (cars, medical equipment), aeronautics (planes), nuclear power production, heating and cooling (air conditioning units).



**Mechanical engineers wear many hats.**

**Civil engineers** develop infrastructure. They study the structural properties of different materials and their interaction with natural factors to optimize the

construction of roads, buildings, bridges, railways etc.

**Chemical engineers** find ways to practically implement chemistry. They work in industries that produce medicine, beverages, cosmetics, food etc from naturally occurring ingredients. They also study the effects of industrial activities on the environment, managing hazardous materials and waste water.

**Geotechnical Engineers** exploit natural resources and assess ground conditions for construction projects. Petroleum engineers, marine engineers, nuclear engineers, and mining engineers all work in this area. Their functions are easily derived from their names. Metallurgical engineers extract and purify metals and other minerals.

**Engineering Management** provides an avenue where engineering projects are managed by a peer rather than a business manager with limited engineering knowledge. Industrial engineers ensure that manufacturing processes are efficient while systems engineers incorporate the different components of a process. They also fall in this group.

**Computer Engineers (Software and Hardware)** either focus on software or hardware. The former — also known as software developers — are the creative minds behind the computer programs that run everything from your laptop to your phone. While the latter Computer work on computer systems and components, such as processors, circuit boards, memory devices, networks and routers.

**Other engineering tracks include Agricultural engineering, Biomedical engineering etc.**

**Find out more here:**

<http://www.beanengineer.com/why-engineering/types-of-careers>