

# Engineering: Technological Discipline Essay

## Introduction

One of the most lucrative and popular courses students can pursue is engineering. The course offers innumerable professional opportunities in big companies such as medicine, oil, and renewable energy. This needs to be clarified among students on the type of engineering course they can study. Engineering is the ability to create, design or build something from available resources. Thus, engineering entails technological and scientific branches that deal with developing and designing engines, products, machines and structures. There are five engineering types: chemical, civil, mechanical, software and electrical.

## Why Each Discipline Is Unique

Each type of engineer offers a variety of education and expertise, explaining why they are unique. For instance, chemical engineers incorporate physics, chemistry, math and biology to develop solutions to issues affecting the production of chemicals, drugs, and food and meet labour standards (Sobral, 2021). Secondly, civil engineers help solve infrastructure issues by maintaining, designing and building public and private amenities such as tunnels, dams, roads, sewer and water systems (Johnson et al.,2019). Electrical engineers are the most diverse as they handle manufacturing, testing and designing electrical components such as navigation, motors, power generation and communication systems. They work in various industries, such as telecommunications, research and manufacturing. Mechanical engineers build, design and develop thermal and mechanical services such as tools, engines and machines (Lyubanova et al.,2020). They are among the broadest fields since they have a vast product range from batteries to electric generators and refrigeration systems. Finally, software engineering is a diverse study of developing, designing and maintaining software.

## Where to Find Jobs

Each engineering career has a specific place where you can find working opportunities. For instance, most chemical engineers work in laboratories and commercial production industries (Sobral, 2021). They are employed mainly by large-scale manufacturing firms to increase production quality and maximize productivity with minimal costs. Moreover, their expertise can be incorporated into nuclear and biomedical careers (Johnson et al.,2019). Civil engineer mostly split their time between project sites and their offices. Some occupations include landscape architect, construction manager, urban and regional contractor and planner. Electrical engineers' expertise varies widely from one sector to another. They can make electronics and computers and repair circuits (Lyubanova et al.,2020). Most of their electronics are used to develop fibre optic networks and car sensors, among other disciplines. Dealing with mechanical engineers, one will determine how specific mechanical devices are incorporated into projects and designed to help the success of a project. Mechanical engineers also investigate failed equipment to discover how various parts can be repaired. Finally, software engineers deal with mobile applications,

computer programs, computer systems and other software-related issues. They ensure devices are up to date with innovative technologies.

### **Things to Will Learn**

In chemical engineering, students learn about biochemistry, information technology, engineering, material science and chemistry. Moreover, they are taught economics, environment, management, health, and safety (Johnson et al.,2019). Civil engineering teaches about the planning, maintenance and construction of artificial structures, including roads, bridges, dams, buildings and canals (Sobral, 2021). Thus, one is taught about the materials, resources and measurements of specific aspects of construction and building. Mechanical engineering degree starts by offering essential topics such as thermodynamics, statics and dynamics, stress analysis, and fluid dynamics to technical components such as designing and drawing. With software engineering, students are taught about computers and technology and how they can code programs and design applications, software and websites (Lyubanova et al.,2020). Finally, electrical engineering deals with hands-on experience compared to other engineering courses. For instance, students gain an extensive understanding of electrical theories, mechanics, circuitry, thermodynamics and computer programming.

### **Emerging Interesting Facts**

chemical engineering is one of the fast-evolving sectors across the world. Countries are producing nuclear weapons and plants to dictate their global influence. Moreover, chemical processing plants that produce plastics, ammonia and other necessary products are being developed. Civil engineering has developed ways of adopting construction technology such as 3D printing, ethical surveillance and artificial intelligence (Johnson et al.,2019). It makes work more accessible by reducing costs, human labour and resources required. Developing and designing surgical robots to improve the mechanical engineering process is an exciting fact. Moreover, the career has presented the functionality of solar panels on space telescopes (Lyubanova et al.,2020). There are innumerable web designers worldwide due to the opportunity offered by software engineering. Besides, the world has become a better place as more software is being developed. The most popular and growing professions are electrical engineering. They assist in contriving various equipment and devices we incorporate into our daily lives.

### **Conclusion**

I admire civil engineering as compared to other engineering courses. Civil engineers are why most buildings and infrastructure are present worldwide. They help in designing, building and maintaining the amenities to avoid injuries. Some notable infrastructures I admire include the Eiffel tower in France, the Erie Canal, the Brooklyn Bridge and the Thames tunnel in London. Such building inspires my ambitions and offers me a chance to challenge their designs by creating something spectacular after completing the course. However, all engineering courses offer individual skills and expertise, depending on their passion.

## References

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