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# Why Industrial Engineering?

There are many different career opportunities in the world now, and that is what makes it hard for anyone to decide what they want to study. Most people go for business administration or a pretty basic career like that when they are not sure what they want to do with their life. Industrial Engineering is the best base anyone can have to be successful in many ways. To start off, it is more likely to get a job if someone has an engineer title than if they have a normal degree. Some other words that can be used instead of engineer are: innovate, create, imagine, etc. Industrial Engineer is by far the best choice anyone can make to take as a major.

“Engineering is the art of doing that well with one dollar, which any bungler can do with two after a fashion”(Wellesley). Why do people study business administrations and management when they do not know what to study? If a person is not sure about what he/she should study, why would they study how to manage something they do not have? Industrial Engineering is the best option because it is the most basic. This career teaches how to do things, how to start from zero. From here there are plenty of branches and PHDs people can get.

Moving on to the next point, engineering is an important profession and is essential to our developing world. Furthermore, picture a world without modern equipment – ranging from the smallest of things like pencils and pens to portable gadgets such as phones and mp3 players to even cars and planes. How difficult would it

be to live in such a world without such amenities? Without engineers – the dominant backbone to most of these inventions – there will be a stagnation of ideas. Therefore engineering is important as our world is thriving to be technologically advanced and we as a people are placing more importance and reliance on technology.

To understand this from a deeper perspective, people must look at science as a whole as science is the basis of success for our civilization. Engineers in general have backgrounds in the mechanics of chemistry and physics. These subjects serve to be very important as a basis because it allows for a good backbone in the various departments engineers can fall into, for example: industrial engineering, electrical engineering, mechanical engineering and environmental engineering to name a few. These various fields serve as the core competencies for many businesses. Looking at computers for example, although Apple and Microsoft may be the leading distributors of the products, innovation heavily relies on the companies' engineers, as they are the ones that can tinker with the core technology allowing for faster speeds or more hard drive space or even better graphics. However it does not only pertain to this field, Industrial engineering, according to WorldWideLearn, can be defined as the integration of machines, staff, production materials, money and scientific methods. The underlying concepts overlap considerably with certain business-oriented disciplines such as operations management however, the engineering side tends to emphasize the mathematical proficiency and usage of the quantitative models.

Engineers control a hefty portion of the current job market in all professional sectors of the world. Every object or piece of equipment made in this world has an engineer's touch in it, either to designing the complexity of the structure or its

functionality. Engineers are always known as the foundation of any company or corporations in the world and that is why they control the vast majority of the world's job markets. Although, any organization in the world needs lawyers or businessmen to make it function but without engineers that will not be able to get the maximum profit of their work. Businessmen are the ones that do the calculation of the supply and demand of the people and then report it to engineers, who customize the machines and the technology for mass production. Moreover, it is said that engineers are the mastermind behind almost every successful company regardless of its field.

Technology is the most sought after and valued commodity in the world right now. The success and prosperity of every other profession depends on how quickly and efficiently they can get their work done and only technology can give them that. "To promote the discovery and exchange of knowledge concerning the characteristics of human beings that are applicable to the design of systems and devices of all kinds". (Database HFES. Web. 1, Dec, 2010).

After an interview with Civil Engineer Alberto Fernandez, he said that with the world now and the amazing increase of population in it, the competition is obviously increasing and to be able to succeed one has to innovate and be creative. The basis for all this is Engineering, and that is why during the last few years the demand for most Engineering programs has increased. He also thinks that Industrial Engineer is the career with more future now.

To summarize some of the engineers tasks in companies, here is a list of some basic things a company needs, that can only be accomplished to the maximum by engineers: "Recommend methods for improving utilization of personnel, material, and

utilities, Develop manufacturing methods, labor utilization standards, and cost analysis systems to promote efficient staff and facility utilization, and Apply statistical methods and perform mathematical calculations to determine manufacturing processes, staff requirements, and production standards.” (Bell, 2009). All major companies and factories have to have this, but people ignore that it is the Engineers in charge of all these jobs. Engineers can work from the bottom to the top, can work with and as employees and as employers. They can not only manage and control companies, but they can create them from zero.

Some examples that people do not realize but happen every day are how Engineers are everywhere and are needed for almost every task in a normal day. To build a house the people needed are an architect and a civil engineer. To run a company it is necessary to have a several engineers and maybe some business men. To innovate the basic need is an Engineer. In the food industry, companies may need nutritionists and/or businessmen, but the food engineers are essential to run the company, as well as the other engineers specialized in finding the best way to produce the product.

Looking at the biggest income sources in the world, to give a few example, Microsoft started from zero, the only thing needed was a dream, imagination and the will to innovate. The business part of the project was almost already done, it was the idea of creating an easier way to communicate around the world, the only thing needed was an engineer to plan, analyze and create it. Other big example from nowadays is oil. Oil is the source that has turned normal people into the richest people in the world. As some may already know, oil is not easy to get, since it has to be removed from under

water. To do this, you strictly need a group of good engineers to plan and come up with the best and cheapest idea to remove the oil from underground.

Observing it from the income perspective, people may say that business is the basic thing you need to be successful in a company, but those are the shallow people, the ones that do not look deeper into production. The income of any company is based on the revenue they gain when selling the product. In every market people are going to have competition, and who wins the competition? The ones that sell the good product cheaper. A businessman or an economist can regulate the price of a product and come up with publicity or deals to sell more, but that is not what companies are made for. Why would someone have to find extra ways to sell their product, when the problem most of the times comes from the bottom. Engineers are the people that make everyone's work easier. Business people take many risks, and although that is not necessarily a bad thing, they have a high probability to fail. They can come up with many ideas to sell their product, but if the price is not affordable for the people, they will either break or not gain anything from it. This is where the engineers come; instead of looking for ways to sell their product at a high price, an engineer will find a way to produce the product cheaper so that the company will gain a good revenue and the people will buy it at a reasonable price.

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