

Engineering 10549

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Engineering

Take a look around yourself. What do you see? Maybe some books, chairs, desks, or even a television. You can be sure that an engineer helped make all of these everyday things. How would you feel if you could design the next new-age technology that altered our society to the extent of how the computer has? Engineers have shaped our world as we know it. There are many different kinds of engineers such as, chemical, mechanical, textile, civil, agricultural and structural engineers. Our civilization wouldn't be as advanced as the Stone Age without these people. This career demands a wide education in math and science. It is an ever-changing career with new advances in materials and the way products are produced.

The job of an engineer itself is a creative job. The actual definition of an engineer is " term applied to the profession in which a knowledge of the mathematical and natural sciences, gained by study, experience, and practice, is applied to the efficient use of the materials and forces of nature." (Encarta) In having the basic skills and experiences in math and science, an engineer is basically an inventor. They are given a problem and are depended upon to come up with a solution. Whether it is a new chemical for an experiment, a mechanical part for a machine, or even a whole new system such as computer operating program. Many engineers work in laboratories, industrial plants, or construction sites where they inspect, supervise, or solve onsite problems. (Britannica 244) Engineers are the problem solvers of our materialistic society.

Engineering careers are very secure with respect to compensation. Regardless of this, it does have its disadvantages as well. Overall, engineering is demanding, but well worth the work. The education of an engineer is probably the most demanding of any other degree. Usually in their first year, a student will be put into a special program that starts their studying with basic math and science courses. These courses are the basis for every engineer's education. After the first two years of the program, the student must choose one field of engineering that he or she would like to pursue. The student then finishes their degree concentrating on that particular field. Towards the end of their college career, the student will usually be offered a job by recruitment, or they will be hired after they graduate. Most employers seek out four-year graduates with a degree in a specific area of concentration.

Engineering has many advantages to offer. The best would probably be the salary. A student with a bachelors engineering degree will be given a higher paying job on average than any other bachelor degree available. (Oakes 12) An average annual salary in a starting Federal Government position was \$96,370 in 1994. Along with high wages comes job security. Even when the economy is bad, unemployment of engineers will only rise one or two points on average. (Oakes 64) Other advantages include interesting work, creative work and working with the latest technological advances in the field you choose to go into. Engineering as a whole shows many superior qualities over other jobs because they are allowed to express themselves when creating a new design.

Engineering also has its disadvantages. One disadvantage of being an engineer is the actual status of being one. It is not looked upon as highly as other fields such as doctors and lawyers. Most of the time they are looked upon as nerds because they are good at math. In addition, most engineers are not promoted to high level positions such as presidents or top executives. They do not have the accounting or business education to do that particular job. This means that most engineers never get the opportunity to be their own boss. (Oakes 22)

Engineering itself has a sort of chain of command in the way a project is handled. It follows in the order form of highest to lowest: management, development, research, design, construction, production, and finally operation. (Britannica 245) This chain is necessary because of the amount of time and work that is needed to make sure that the project they are helping to create or resolve is successful in every way asked of it. The time of lone engineers is passing and now most Engineers work on teams that are highly experienced in that particular field. (Pollack 45) Another reason that a team is now being used more often is because of what is being asked of them. With the fast paced world and the developing of new materials, many engineers are no longer wanted to fix small imperfections; they are wanted to come up with whole new systems. (Pollack 45) These new ways of developing technology are putting out more user-friendly technology than ever before. This is because there are more opinions and ways of thinking being put into a product with team systems. Engineering itself has always been an ever-changing career that requires you to keep up with new materials and ways of doing things. The history stretches as far back to when

man was first learning and began to use tools. (Britannica 248) However, the first great engineering feats that are still around today came from Egypt. In the ancient world, Egypt was the premier civilization as far as engineering is concerned. Architectural construction was the primary concern of ancient Egypt. Their most successful projects were the Sphinx and The Great Pyramids. (Garrison 67) These great feats of structural engineering showed Egypt's supremacy over other cultures and also marked the first exciting developments of engineering in our civilization. As time passed and Egypt lost power, Rome and Greece led the way in new technology and engineering. (Garrison 68) One of Rome's great achievements was the invention of flowing water in populated urban areas. (Garrison 68) They did this with a system called aqueducts. Now they are called " The Aqueducts of Italy". (Garrison 69)

Engineering is still making great developments that affect our society extremely. The most rapid development in our civilization has come in our own century. With the rapid advances in the materials we use, the field of engineering has become wide spread. Our greatest achievement is the invention of the computer. These machines have enhanced our lives in ways never before conceived. Computers are becoming the future of engineering as we look ahead. (Pollack 78) These machines have changed the way the whole industry works. Computers have made it possible to test the structural integrity of a building s design so that modifications can be made if it fails to hold up in a simulated earthquake. (Pollack 125) Computers have made the drafting of building plans much simpler than drawing them by hand. Instead of having four draftsmen, you can have one person on a computer doing the

same amount of work, only faster. As a result, many engineering jobs are being replaced by computers and putting many engineers out of work. (Pollack 78) Many companies wanting to keep their employees are willing to train them to work with computers, but some companies want to lay off hundreds of employees at a time. The career of engineering has been changed the most by the computer. The first time people started using them, it was incredible! One person could sit at a computer and do the same amount of work that four others were doing by hand.

The education required to become an engineer is quite strenuous. Never the less, the career of engineering is one that provides many benefits to the ones who are willing to work for the degree. This field has a variety of areas to excel in. It provides creative work, the chance to work with a team, and the compensation is far from the average. Engineering is also one of the most important careers in our society. Without it, our civilization would be nothing like it is today. The pleasures that many of us take for granted would not be here to comfort us everyday.