

M'sila University – Faculty of engineering

Civil Engineering Department

Professor: Have a seat. What can I do for you ?

Student : I am going to be an engineer, but I am having a little trouble deciding which field to go into. The dean suggested that I have a talk with you about the work of a civil engineer.

Professor : Well , I don't know how helpful I can be, but I'll be glad to give you some general idea of the field .

Student: Good, that is just what I want.

Professor: One of the better known areas construction engineering. It deals with the construction of all kinds of structures , like bridges , factories, dams, and so on .

Student: Does it include the design?

Professor: Not necessarily. The structural engineer will usually do this. His job , of course , is to follow the general design and make sure that structures are sound . He will have to figure stresses and strains , size of beams , etc . It is a very demanding field, because it usually involves a great deal of mathematics.

Student : I see . What about water control, in general?

Professor : Oh , yes. This important field. It includes problems in irrigation, flood control, and water supply. Another area, not so well know , is sanitary engineering , which deals with sewage and industrial waste .

Student : Road building must also be an important field.

Professor : And a very complex one. Transporting engineering doesn't involve only roads, by the way. For instance, airport design and construction is a major concern.

Student: do civil engineers usually work with a company?

Professor : usually, yes . There are large as well as small civil engineering firms. Their size depends on the scale of the projects they undertake. A smaller number of civil engineering become what are know as consultant engineers. They are experts in particular Fields and they are consulted by larger firms on specific projects.

Student: Well , Thank you very much .

Professor : ok . Lots of luck in your career.

M'sila University – Faculty of engineering

Common Technology Department

English course

Student : Could you give me a general idea of what electrical engineering is like ? My knowledge is pretty much limited to the appliances around our house.

Professor : I'll try, although it is a very broad field. To start with, there is the power engineer. The problems he deals with concern the efficient generation and distribution of electrical power..

Student: What are some of the problems?

Professor : They have to do for example, with the voltage at which power must be generated. Then there are the problems of controlling the phase, the frequency, and the loads of the power systems.

Student : I imagine this is one of the oldest areas of electrical engineering .

Professor : Yes, but it is still a very important and complex field. More recent are the fields of communications, computers and industrial electronics. .

Student : Could you give me an idea of what they are ?

Professor : In communication, of course, the object is to send messages of many types from one location to another. Modulation, channel capacity and waveguides are only a few of the problems that come up.

Student : I see.

Professor : The term "computer" is often misunderstood. Some computers handle basically simple problems of arithmetic at unbelievably high speeds. There are other types, however, and the primary purpose of industrial electronics is to control large amounts of power.

Student: That gives me a pretty good idea, I think.

Professor : We haven't even touched one many new fields, such as solid state engineering but we can discuss these another time, if you like ?

Check-up

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| 1. appliance | 8. generation |
| 2. beam | 9. Load |
| 3. Channel | 10. modulation |
| 4. Computer | 11. phase |
| 5. Crane | 12. sewage |
| 6. Cycle | 13. Voltage |
| 7. frequency | |

