



Becoming a Chartered Engineer

A chartered chemical engineer at work

Will Marshall is a fire services engineer. He ensures that engineering projects are designed to minimise the risk of fire and the hazard to life and property.

Thinking of becoming an engineer? For a professional engineer, gaining chartered status is a key milestone. Having recently achieved this himself, Will Marshall is in a good position to explain what this means.

Firstly let me explain what a Chartered Engineer is. Lots of people call themselves engineers, ranging from the person that comes to fix your boiler, to someone that designs bridges, to someone like myself who designs fire strategies and fire engineering solutions. These people are correct to call themselves engineers of a sort, but the level of skills and experience can vary greatly among them.

Education and practical experience are both taken into consideration when an engineer applies for chartered status. A Chartered Engineer is an engineer who has reached a high level of competency and commitment to professionalism in their particular branch of engineering. Standards vary to an extent between countries. In the UK, the Engineering Council set the skills and competencies required to become a Chartered Engineer.

Chartership benefits

The benefits of becoming chartered are many and will vary for each individual and each specialism within the broad field of engineering. They will however, generally, increase your promotional prospects (I was promoted when I achieved chartership), your earning power, respect from people both within and outside of the engineering industry, and many more. With these benefits come a level of responsibility to the engineering profession and yourself with rules and regulations which must be followed. Clearly there is a benefit for all professional engineers aspiring to and working towards chartered status. And once you have achieved chartered status, you can put the letters CEng after your name.

The main elements of the chartership process are shown in the flow diagram (left). The actual application is made through a professional engineering institute such as the Institute of Fire Engineers.

Education

The educational phase of the application is probably the most structured of the three stages to complete. The trick is to ensure that you get yourself a place on an engineering course that is accredited by the Engineering Council. This is something that universities will usually highlight on course prospectuses but you can check on the Engineering Council's website. To gain entry to an accredited engineering degree course you will normally need to have A2 level Maths and Physics. A masters level degree or equivalent is required to meet the educational requirements for the Chartered Engineer application. It is necessary to achieve higher A2 grades to enter the masters degree (MEng) rather than the bachelors degree (BEng). In the case of Brunel University, where I studied, it is possible to gain entry to the BEng initially and transfer to the MEng if a high enough grade is achieved during the first two years of the degree, which I did.



Chartered engineer - career structure



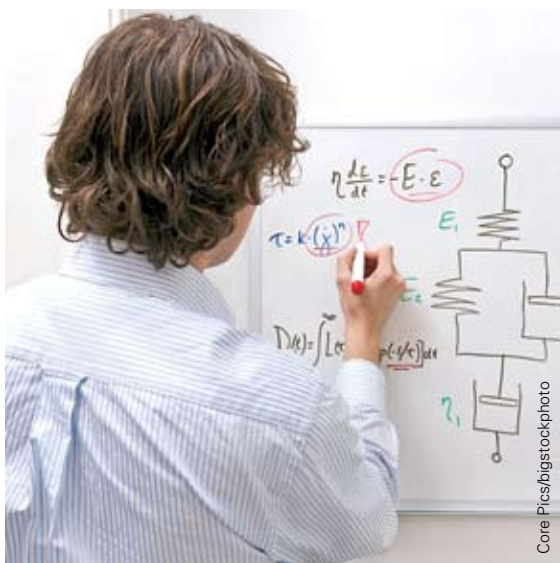
Engineering students often work with professionals on real projects.



Hats off! Graduation day for the engineers

Professional experience

Once you have achieved your educational background to engineering now is the time to put all that training into practice. But it's not just engineering skills that are needed to become a Chartered Engineer. Skills are also needed in management of technical work and people, business, and professional judgement. These skills will not be learnt or even be needed at an early stage of your career and several years experience will be needed. I became chartered after four and a half years of experience but it can take more than this.



An engineer must demonstrate good communications skills.

The way you gain your experience and competencies will vary by individual, company and institute so I won't even try to go into this in this article. There are many advantages and disadvantages of each route so be sure to research thoroughly and pick the right one for you.

I have worked in both England and Scotland where the fire codes vary significantly between countries. Working in these two different environments was very beneficial and helped round me as an engineer. I would wholeheartedly suggest any opportunity that you are presented with to work in a different environment you embrace as you will gain experience much more quickly and over a wider skill base.

Application and interview

The application and interview process does not require you to develop any further skills, they simply require you to demonstrate those that you have learnt. I found that the process of preparing the application identified to me a number of skills which I didn't realise that I had. So simply by completing the application I have improved further as an engineer by becoming more aware of my abilities.

The details of the application process vary by institute but normally consist of preparing a professional review report, filling in an application form and attending an interview.



The long road

For most professional engineers, chartered status is likely to come when they are in their late twenties, perhaps 10 years after leaving school. It takes that long to gain a higher degree and to have the necessary experience. This may seem an awful long way off to you, but by planning now you will certainly benefit later.

Will Marshall MEng CEng MIFireE is a fire services engineer based in Edinburgh.



Will Marshall at his desk

A telecommunications engineer – he belongs to the Institution of Engineering and Technology.

Professional bodies

Many branches of science and engineering are governed by a professional body with a royal charter. Examples are the Institute of Mechanical Engineers (IMechE) and the Royal Society of Chemistry (RSC). Professionals working in these areas can apply to become members and, later, fellows of these bodies, indicating their professional status. Some of your teachers will belong to professional bodies.