

POSTGRADUATE OPPORTUNITIES: WHICH ONE IS FOR ME?



JARKA GLASSEY, CHAIR OF ICHEME'S EDUCATION SPECIAL INTEREST GROUP, EXPLAINS TO TCE THE DIFFERENCES BETWEEN AN MSc, AN MEng, A PhD AND AN EngD

In the UK, there's quite a choice of postgraduate study options.

If you want to do a master's degree, you can choose an MEng or an MSc. If you want to do a doctorate, you have a choice of a PhD or an EngD. Which do you go for? How do you choose?

Jarka Glassey, from the University of Newcastle, explains that which one you choose depends largely on what you want at the end of it. She says that a large proportion students in the UK still graduate with a BEng (Bachelor of Engineering) degree, and points out that the route to getting Chartered is much more direct with a master-level qualification.

MSC OR MENG?

An MEng (Master of Engineering) degree is an integrated undergraduate master's course in the UK lasting four years. Some universities will allow students to

switch to an MEng from a BEng course, while it is also possible in some places for an MEng student to graduate early with a BEng.

An MSc (Master of Science) is a one-year postgraduate programme available to those already holding a bachelor's degree.

"A master's degree either prepares a graduate for industry and getting Chartered, or they can go for further learning, and choose to do a PhD or an EngD. In the UK you can do a PhD or an EngD directly from a BEng. Very few countries will allow you to do this. More and more we see our students wanting to do a PhD overseas but some institutions will not accept them with just a BEng," says Glassey.

WHY CHOOSE AN MENG DEGREE?

MEng graduation happens at the same time as all the other

undergraduate graduations, so you would be able to start work from July onwards. An MSc, however, runs for a calendar year, finishing in September or October. By this time, many job openings for master's-qualified graduates that year will have been filled.

WHY CHOOSE A BENG AND AN MSC POSTGRADUATE COURSE?

■ **Specialism.** "If I was a graduate that was interested in a specific industry, for example the nuclear industry I would choose to graduate with a BEng and go for a specialised MSc," says Glassey

■ **Solve the problem of a worse-than-expected degree.** "In the UK, an MSc is seen as a way of 'upgrading' your degree. For example if you've got a 2:2 and an MSc it's taken that you've pulled at least one classification up," says Glassey.

A CHOICE OF DOCTORATES

There are three main choices of doctoral programmes, a PhD, an EngD and a CASE studentship.

A PhD is funded by the relevant research council, ie the Engineering and Physical Sciences Research Council (EPSRC) or the Biotechnology and Biological Sciences Research Council (BBSRC). The programme typically lasts three years and while there generally isn't a taught element, you will be expected to complete training in scientific writing, presentations or similar.

An EngD is a four year, industry-focussed programme carried out at an engineering centre for doctoral training (CDT). There are a number of CDTs in the UK, focussed on specific disciplines. For example, UCL has the bioprocessing CDT; Newcastle University has the

biopharmaceutical CDT; Bath has the Sustainable Chemical Technologies CDT; and the University of Strathclyde hosts a CDT in continuous manufacturing and crystallisation. Programmes are each supported by an industrial partner and you will often spend time working at one of their sites. The programme includes a taught element. Not all universities have a CDT.

The third option, a CASE (Cooperative Awards in Science and Technology) studentship, is similar to an EngD, but typically lasts for three years. They are generally co-funded by the relevant research council and an industrial partner. There is generally no taught element.

"If you are after a specific set of skills, or looking to work in a specific industry, look for an EngD or a CASE studentship with that kind of company, because it will open up more doors for you," says Glassey.

BENEFITS OF A PHD

■ choice of course – there are a lot more PhDs available than the other programmes

■ choice of institution – more universities offer PhDs as they don't need to have a doctoral training centre

■ blue skies research – on an EngD or CASE programme this often isn't possible as the sponsor company wants to see the business impact of your work

■ useful if you wish to enter academia

BENEFITS OF AN ENGD

■ a company provides the topic and typically hosts some of your work and research at its own site

■ applied industrial research with a clear commercial aim

■ contact with a company/

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industry which could give you useful contacts for future employment

■ company sponsorship means a higher stipend

BENEFITS OF A CASE STUDENTSHIP

■ industrial partner which helps with funding

■ applied research

■ three years rather than the four years of an EngD

■ contact with a company/industry which could give you useful contacts for future employment

DIFFERENT ROUTES, SAME OUTCOME

"At the end of the day you will submit a thesis, have a viva, and if everything goes well, you will have 'Dr' in front of your name at the end of it," says Glassey.

FINDING A PROGRAMME

You may find out about suitable programmes through lecturers at your own university, or through university websites.

Most are also advertised on www.findamasters.com and www.findaphd.com.