

# Frequently asked questions

## What is chemical engineering?

Chemical and biochemical engineering is all about changing raw materials into useful everyday products in a safe and cost-effective way with the least possible impact on the environment. Also known as **process engineering**, it takes the most exciting elements of science and combines them with the real-world application of engineering to offer students a challenging, diverse and rewarding career.

## What does the work involve?

Chemical and biochemical engineers play a key role in everyday life. From face creams to fuels, food and fashion, they create the products and materials we all depend on. They are problem solvers too: helping to manage the world's natural resources; protecting the environment; securing clean water supplies; formulating new pharmaceuticals and foods; and working at the forefront of stem cell research. Chemical engineers need to work as part of a team and develop good communications skills. Strong problem-solving and analytical skills are also a bonus.

## What qualifications do you need for entry to a chemical engineering degree course?

The general entry standard is:

- A-Levels: 120-160 UCAS points (A\*A\*A-BBB) including maths and chemistry
- Highers/Advanced Highers to include maths and chemistry
- Irish Leaving Certificate – minimum of six subjects to include maths at grade H4 or above
- International or European Baccalaureates, or equivalent qualifications to the above are usually considered.

Foundation degrees are available at selected universities for those students without the traditional entry requirements.

## What sort of jobs can you do with a chemical engineering degree?

The choice of work available is exceptionally wide and job roles vary depending on the industry. Chemical, process and biochemical engineers work in sectors as wide ranging as chemicals; pharmaceuticals; food and drink; biotechnology; materials; oil and gas; energy; water; nuclear and the environment. They are also highly sought after in business and finance.

## How much does a chemical engineer earn?

Chemical engineers are typically the highest paid group of engineers with an average salary is £55,000 rising to £72,000 for Chartered Chemical Engineers. The average starting salaries are around £30,000\*

## How can I find out what degree courses are available?

You'll find links to every university offering degree courses accredited by the Institution of Chemical Engineers (IChemE) in the university section of our website at [www.whynotchemeng.com](http://www.whynotchemeng.com). Alternatively you can use UCAS's course search function at [www.ucas.com](http://www.ucas.com) and search for 'chemical engineering'.

\*Early-career engineers aged under 25. Source: IChemE salary survey 2017.

## How do you choose a chemical engineering degree with a good reputation?

Look for courses which are accredited by the Institution of Chemical Engineers (IChemE). IChemE has strict accreditation procedures to ensure high standards are maintained. You can research courses using the Accredited Course Search tool on Engineering Council's website at: [www.engc.org.uk/acad](http://www.engc.org.uk/acad)

## Are all the courses the same at university?

Except for the compulsory 'core' subjects which are usually studied in the earlier years, there is a broad range of optional subjects such as energy, environmental, nuclear, materials or petroleum engineering, as well as non-engineering options such as business management or a foreign language.

## What is the difference between a BEng and MEng degree?

The MEng course typically lasts a year longer than the BEng course and provides a greater depth of study. Choosing an accredited MEng course can make it easier for you to become a Chartered Chemical Engineer once you start work.

## Are there any courses that offer the chance of a year abroad or in industry?

Many universities offer sandwich courses giving the opportunity to spend time in industry getting relevant work experience or studying at a university in another country. When considering a degree, bear in mind that many universities encourage students to take time out for industrial experience, even if their degrees are not advertised as sandwich courses. The admissions tutors at each university will be able to tell you if they support industrial experience or overseas study. Email us at [enquiries@icheme.org](mailto:enquiries@icheme.org) and request a copy of our free course guide.

## Can students with a chemical engineering degree enter other fields of employment?

Yes! Chemical engineering is a well-respected degree that opens many career paths across industry and commerce. Chemical engineering graduates are highly sought after by employers for their analytical and problem-solving skills with many graduates choosing non-engineering related careers each year.

## Is work experience available and how do you find it?

Many companies offer work experience placements – some as short as one week, others lasting 6 months or even a year. To find out more visit the website of the company you are interested in and write to them directly. Alternatively, The Year in Industry ([www.etrust.org.uk/the-year-in-industry](http://www.etrust.org.uk/the-year-in-industry)) find paid, degree-relevant work placements for students in their year out before, or during, university.

## Are there any bursaries, grants or sponsorship awards for chemical engineering?

A number of companies and organisations offer schemes to financially assist chemical engineering students, though demand is high. Contact universities directly or search for all relevant funding at [www.scholarship-search.org.uk](http://www.scholarship-search.org.uk).

For more information visit [www.whynotchemeng.com](http://www.whynotchemeng.com)