

Design Engineer

Design engineers research and develop new products, equipment and systems or make improvements to existing products. They would usually follow guidelines specified by the client including quality, cost and timescales. You could be working in any of the engineering disciplines including civil, chemical, electrical or mechanical.

The Work

You could be:

- preparing detailed technical drawings to a relevant standard and specification
- using computer-aided design (CAD) and computer-aided engineering (CAE) software to produce designs and drawings
- researching new developments and innovations and working out how to use them within budget
- selecting appropriate materials, making a prototype and testing it
- generating, collecting and analysing data
- modifying and re-testing prototypes, repeating the process until ready for production
- meeting with clients and project managers to discuss the progress of the project
- leading a team of engineers and managing projects to deadline and budget
- specialising in a particular area, such as mechanics or electronics.

Pay

Pay rates vary, depending on:

- where you work
- the size of company or organisation you work for
- the demand for the job.

Starting salaries for newly qualified design engineers in the UK tend to be in the range of £25,000 to £36,000 a year. Experienced engineers can earn up to £50,000 or more a year.

Conditions

- You could work for a manufacturing company, a design consultancy or a design engineering company.
- You would be based in a studio, office or workshop, but may travel around visiting clients.
- Hours are usually normal office hours, Monday to Friday, but you may have to work evenings and weekends to meet deadlines.

Getting In

- To enter as a design engineering technician, you would normally need an HNC (SCQF Level 7) or HND (SCQF Level 8) in product design.
- Design engineers require a relevant degree (SCQF Level 10) such as design engineering, product design engineering or industrial design.

- Other engineering disciplines are also relevant.
- Entry to an HNC or HND is usually 1-2 Highers including Maths and Physics or a technological subject. For entry to a degree you would need 4-5 Highers including Maths and Physics or a technological subject.
- You could work towards the Foundation Apprenticeship in Engineering (SCQF Level 6) whilst at school. This may be accepted in place of 1 Higher at college or university.
- Glasgow (including Glasgow School of Art) and Strathclyde universities offer degree courses that are accredited by the Institution of Engineering Designers (IED).
- You might get in by starting with a Modern Apprenticeship, which are available up to Technical level, then gaining experience as a technician first.
- You may need a portfolio of your design work.
- You may be required to have a driving licence, for travelling to meet clients.

What Does It Take

You need to have:

- excellent problem solving skills
- a good eye for detail and design
- excellent IT skills including CAD software
- a good knowledge of engineering principles
- good project management skills
- good communication skills.

You need to be able to:

- generate ideas
- work to a budget and deadline
- work calmly under pressure
- work as part of a team
- motivate people.

Training

- As a graduate, you would train on the job with an experienced design engineer.
- You would need to go on short courses throughout your career to learn about new software packages and technologies that come on the market.
- The Institution of Engineering Designers has a list of accredited training courses on their website.

Getting On

- After gaining your degree and some further training with an employer, you can register with the Engineering Council as a professional engineer – either as Incorporated Engineer (IEng) or Chartered Engineer (CEng).
- For IEng you need to have either a recognised Bachelor's degree or a recognised HNC or HND plus further study to Bachelor's degree level.
- For CEng you need to have a recognised Bachelor's degree with Honours plus a recognised Masters

degree (or equivalent), or a recognised integrated Master of Engineering (MEng) degree.

Contacts

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Statistics

Employment Status UK %

100.00%
FT Employee



LMI data powered by [LMI for All](#)

Past Unemployment - Scotland

No Claimant statistics available for Scotland.

Predicted Employment Statistics : Not available this career.