Electrical Engineer

Electrical Engineers design, build and maintain electrical systems, machinery and equipment.

Average salary (a year) <u>What does this mean?</u>

£21,000 **starter**
to
£52,520Experienced

Typical hours (a week)

35 to 40a week

You could work

Evenings occasionally

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FUTURE EMPLOYMENT

There will be 4% more Electrical engineer jobs in 2022.
<u>In your local area</u>

How to become

You'll need to complete a foundation degree, HND or a degree and can get into this job through:

- a university course
- an apprenticeship
- applying directly

University

Most people do a degree in electrical or electronic engineering. You may be able to get in with other degrees like:

- mechanical engineering
- electromechanical engineering
- building services engineering
- applied physics
- aeronautical engineering
- mechatronics

Entry requirements

You'll usually need:

- 1 A level for a foundation degree or higher national diploma
  3 A levels for a degree

More information

- equivalent entry requirements
- student finance for fees and living costs
- university courses and entry requirements

Apprenticeship

You could do a higher apprenticeship as an electrical/electronic technical support engineer, lasting around 4 years.

An advanced electrotechnical apprenticeship lasts about 3 years.

Depending on your employer, you may be able to get the following qualifications:

- NVQ 4 in engineering
- higher national certificate (HNC)
- higher national diploma (HND)
- degree

Entry requirements

You'll usually need:

- 5 GCSEs at grades 9 to 4 (A* to C) and college qualifications like A levels for a higher or a degree apprenticeship

More information

- guide to apprenticeships
- equivalent entry requirements

Direct application

If you've already got a relevant degree you could apply directly to get onto a company's graduate trainee scheme.

More information

Further information

[Electrical Careers](#) and [The Institution of Engineering and Technology](#) (IET) have information on careers in electrical engineering.

What it takes

Skills and knowledge

You'll need:

- knowledge of engineering science and technology
- maths knowledge
- knowledge of computer operating systems, hardware and software
- design skills and knowledge
- to be thorough and pay attention to detail
- analytical thinking skills
- persistence and determination
- excellent verbal communication skills
- advanced digital skills for programming and using a range of computer languages, hardware and software

Restrictions and requirements

You'll need to:

- take a colour vision test

What you'll do

Day-to-day tasks

Your day-to-day tasks depend on the industry you're in, but could include:

- carrying out feasibility studies for new technical developments
- drawing up project plans and circuit diagrams using computer-assisted engineering and design software
- estimating costs and project timings
- coordinating the work of technicians and craftspeople
- testing installations and systems, and analysing test data
- making sure projects meet safety regulations
- overseeing inspection and maintenance programmes
- attending meetings, writing reports and giving presentations

Working environment

You could work in a factory, at a production plant, at a power station, in a workshop, at a research facility or in an office.

Your working environment may be at height.

Career path and progression

You could work in different industries, from power and renewable energy to transport, construction and manufacturing.

You can improve your career prospects with incorporated or chartered engineer status. Chartered status can help you move into electrical design and project management roles, specialise in a particular field, or work as an engineering consultant. The Engineering Council have further details on how to become a chartered engineer.