Electrical or Electronic Engineering Technician

Electrical or electronic engineering technicians are involved in developing, manufacturing, testing, installing and maintaining electrical and electronic equipment. They can work with either electrical systems and controls that generate and supply power, or electronic components for a wide range of devices, such as computers or transportation systems.

There can be an overlap between the two.

The Work

You could be:

- working with engineers to help design, develop and test systems, components and equipment
- installing and maintaining equipment which generates power, such as boilers and turbines
- manufacturing the transformers and transmission systems which distribute electricity to homes, offices and factories
- working with building systems such as heating, lighting, lifts, ventilation and refrigeration
- installing and maintaining electronic systems in industry, including automated machinery
- developing and testing the circuits and components which control the functions of electronic equipment, such as computers, medical apparatus and mobile phones
- testing, repairing and ensuring efficient running of a wide range of electrical and electronic equipment
- installing and connecting cables and components
- using a range of specialist tools and equipment to diagnose faults and carry out maintenance.

Also see the Offshore Service Technician job profile for working specifically in the oil and gas industry.

Pay

The figures below are only a guide. Actual pay rates may vary, depending on:

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

The starting salary for electrical or electronic engineering technicians is normally in the range around £24,000 a year. With experience this can rise to around £48,000 a year.

Conditions

- Depending on your job you would work in a design laboratory, factory, workshop or onsite, perhaps in a power station.
- Working conditions and hours will vary greatly depending on the industry in which you are employed.
- You may work normal daytime hours or have to work shifts, including nights and weekends.
- You may have to wear overalls and, in some cases, protective glasses, gloves and shoes.

- The work may involve bending, lifting and working at heights.
- You may need to travel between different sites.

Getting In

- You could enter through the Engineering Foundation Apprenticeship (FA) (SCQF Level 6), which you can start in S5 and study at school and college. Entry requirements vary between colleges, but you usually need 3 subjects at National 5 including English and Maths. Some colleges also ask for Physics.
- You could enter through a Modern Apprenticeship (SCQF Levels 5-8). Requirements vary, but you usually need 3 subjects at National 4 or 5 including English, Maths and a science or technological subject.
- You will have to take an aptitude test.
- Or you could start by taking a qualification in electrical or electronic engineering or a similar subject. Relevant courses include an NC (SCQF Levels 5-6), NQ (SCQF Levels 4-6), HNC (SCQF Level 7) or HND (SCQF Level 8).
- Entry requirements range from about 3 subjects at National 4 or 5 for NC and NQ courses to 1-2 Highers for HNC and HND courses.
- You should normally have English, Maths and at least one science or technological subject at National 4 or 5 as a minimum.
- You may be able to qualify by other training routes.
- Certain colour vision conditions may affect entry to careers in this branch of engineering.
- A driving licence is useful.

Electrical or electronic engineering technicians work in a wide variety of industries including manufacturing, renewable energy, aerospace, chemicals, transport and utilities as well as in local and central government and the health service.

What Does It Take

You need to have:

- an interest in science and technology
- practical and technical abilities
- good analytical, numeracy and IT skills
- excellent problem solving skills
- good communication skills
- an accurate, methodical approach
- an awareness of health and safety issues.

You need to be able to:

- work alone or as part of a team
- plan your own work to meet agreed deadlines
- pay attention to detail
- follow instructions and read technical drawings.

Training

- Training through a Modern Apprenticeship combines on the job and off the job training and leads to an SVQ in an electrical and electronics subject.
- If you take a college course first, you would then take a job with an employer and do further training to gain SVQs.
- After your apprenticeship or college course, and further training with your employer, you can work towards registering as Engineering Technician (EngTech) with the Engineering Council.
- If you do not follow either of the above training routes, you may still be able to achieve EngTech by another approved route. You can check these alternative routes with the Engineering Council or with the relevant professional engineering institution.
- You need to keep up to date with new developments throughout your working life.

Getting On

- With experience, you may be promoted to work as a supervisor and could perhaps move into a management role.
- You might move into marketing, sales or electrical design work.
- Technicians usually work under the general supervision of professional electrical or electronic engineers. With further study and training, you could progress to become an electrical or electronic engineer at the higher levels of Incorporated Engineer (IEng) and Chartered Engineer (CEng).
- There may be opportunities to work abroad.

More Information

The Engineering Council sets and maintains the standards of the engineering profession in the UK. It does so through 50 professional engineering institutions which are Licensed Members of the Engineering Council.

The Tomorrow's Engineers website has more information on careers in engineering.

Contacts

Statistics

Past Unemployment - Scotland

No Claimant statistics available for Scotland.

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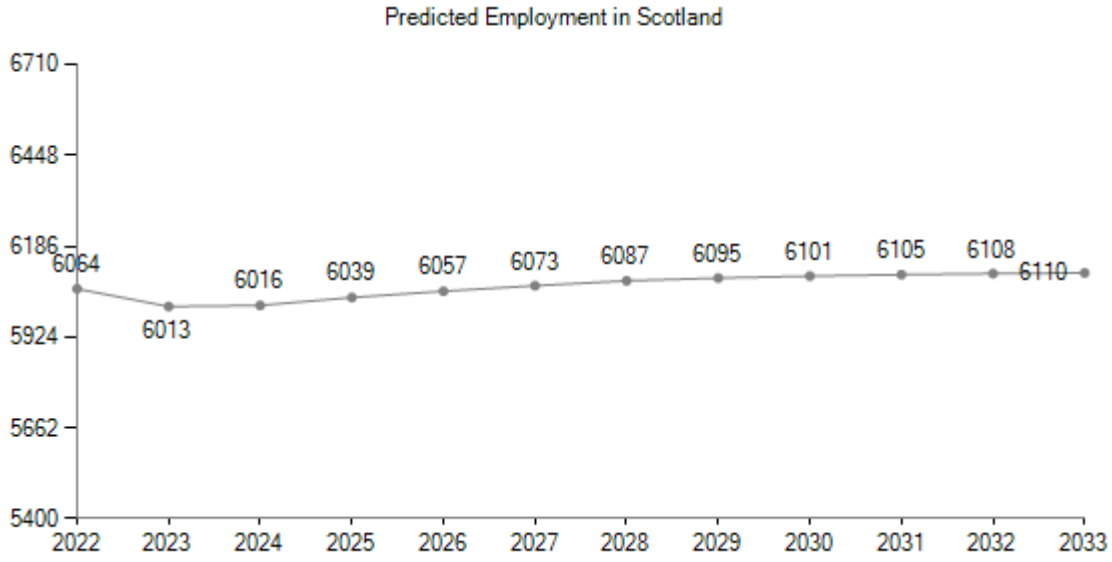

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