

JOB PROFILE: ELECTRICAL ENGINEERING TECHNICIAN

WHAT'S IT ALL ABOUT?

Electrical engineering technicians install, maintain and repair electrical equipment and controls across a wide range of industries, including:

- power generation and transmission – installing turbines, switchgear and cabled/overhead power lines and street lighting networks
- industrial machinery and equipment – making, fitting and repairing drives, motors and programmable logic control (PLC) panels
- transport – upgrading rail electrification and signalling systems
- building services infrastructure – installing and maintaining lighting, heating, air conditioning, lifts and escalators.

Electrical technicians follow engineering instructions and use wiring and circuit diagrams on installation and repair jobs. They also use a range of tools to calibrate, inspect and test installations and machinery to make sure they are working correctly and safely. Experienced technicians may have responsibility for drawing up preventative maintenance rotas and carry out quality control checks, for example on production line machinery.

Technicians normally work as part of a team, often supervising fitters and operators.

HOURS & ENVIRONMENT

As an electrical engineering technician you would usually work a 40-hour week, including shiftwork and overtime. You might also have on-call duties to respond to out-of-hours problems.

Your working environment would depend on your job but could include offices, factories, workshops, power stations and research facilities.

SKILLS & INTERESTS

As an electrical engineering technician you will need:

- ability in maths, science and technology
- excellent problem-solving skills
- good numeracy and IT skills
- excellent practical skills
- good communication skills
- the ability to read engineering drawings and diagrams
- a willingness to keep up to date with new developments
- good teamworking skills
- normal colour vision
- an awareness of electrical health and safety issues.

ENTRY

You may be able to get into this job through an Apprenticeship scheme. The range of Apprenticeships available in your area will depend on the local jobs market and the types of skills employers need from their workers. For more information on Apprenticeships, visit www.apprenticeships.org.uk.

You can also take college qualifications, which are open to all age groups. These will give you some of the skills needed for the job. Courses include:

- BTEC Certificate/Diploma in Operations and Maintenance
- BTEC National Certificate/Diploma in Electrical Engineering
- City & Guilds Progression Award in Electrical and Electronics Servicing (6958) levels 2 and 3
- City & Guilds Certificate in Electrotechnical Technology (2330) levels 2 and 3.

For details about electrical engineering as a career, see the Institution of Engineering and Technology (IET), SEMTA and Women into Science, Engineering and Construction websites in Further Information. The Engineering Training Council (Northern Ireland) also has careers information and a course database for local colleges.

TRAINING

Once you are working as an electrical technician, there is a range of work-based NVQ qualifications available, depending on your job role. These include:

- Performing Engineering Operations levels 1 and 2
- Electrical and Electronics Servicing levels 2 and 3
- Engineering Maintenance and Installation (Electrical) Level 2 (includes lifts and stairlifts)
- Process Engineering Maintenance (Electrical) levels 2 and 3
- Installing and Commissioning Electrotechnical Systems and Equipment (Plant) Level 3
- Electrical and Electronic Engineering Level 3
- Electricity System Technology Engineering levels 2 and 3 (covers power generation, distribution systems and decommissioning).

There is also a City & Guilds NVQ in Electrotechnical Services (2356) levels 2 and 3, which has several

pathways: installation, maintenance, instrumentation, public lighting, panel building and electrical machine repair and rewind.

Your employer may also ask you to take the City & Guilds Inspection, Testing and Certification of Installations (2391) and City & Guilds 16th Edition IEE Wiring Regulations (2381). Check with local colleges and training providers to see which of these awards is the most appropriate to your job.

As a technician, you may continue to study part-time for an BTEC HNC/HND in Electrical Engineering. Degree courses in electrical engineering are also widely available, which could lead to full qualification as an electrical engineer. The IET website (in Further Information) has details of UK colleges and universities offering these higher level courses.

If you are an experienced electrical technician, you could think about registering with the Engineering Council to gain EngTech status for professional development purposes.

OPPORTUNITIES

Your prospects are very good if you are a qualified electrical technician. You can find job opportunities across a wide range of industries, including aerospace, marine and agriculture, chemical and manufacturing, power and civil engineering.

Employers include local and central government departments, the armed services, manufacturers in all industries, research and development companies, IT companies, and public utilities such as water, gas and electricity.

With experience, you can move into supervisory jobs, electrical design work or take further training to move

up to engineer level. Self-employment as an electrical sub-contractor may be another option.

ANNUAL INCOME

- Starting salaries are between £13,000 and £18,000 a year, depending on the job
- Experienced electrical technicians earn between £18,500 and £23,500
- Senior technicians can earn between £25,000 and £31,000

Figures are intended as a guideline only.

FIND OUT MORE...

Women into Science, Engineering and Construction

2nd Floor
Weston House
246 High Holborn
London
WC1B 7EX
Tel: 020 3206 0408
<http://www.wisecampaign.org.uk>

Engineering Training Council (Northern Ireland)

Interpoint
20-24 York Street
Belfast
BT15 1AQ
Tel: 028 9032 9878
<http://www.etcni.org.uk>

Institution of Engineering and Technology

Savoy Place
London
WC2R 0BL
Tel: 020 7240 1871
<http://www.theiet.org>

SEMTA (Science, Engineering and Manufacturing Technologies Alliance)

14 Upton Road
Watford
Hertfordshire
WD18 0JT
Tel: 0800 282167
<http://www.semta.org.uk>