HM Government

T-LEVELS

Qualification Description

T Level Technical Qualification in Engineering, Manufacturing, Processing and Control

T Levels are new qualifications that follow GCSEs and are equivalent to three A Levels. T Levels will combine classroom theory and practical learning, and are made up of the following:

- Technical Qualification: the substantial component of your course.
- Industry placement: of at least 315 hours (approximately 45 days) with an employer to make sure you have authentic experience of the workplace.

The Technical Qualification is the main classroom-based element of the T Level. During your two-year course, you will learn the core knowledge that underpins the sector, and you will also develop occupationally specific skills that will allow you to enter skilled employment within a specific occupation.

This T Level Technical Qualification has been developed in collaboration with employers, so the content meets the needs of industry and prepares you for work. It will provide the knowledge and experience needed to open the door to skilled employment, an apprenticeship or higher-level study.

What is the Engineering Industry?

Engineering and Manufacturing is a hugely important global industry contributing up to a third of the UK's total economic output, with a significant impact on our daily lives such as in the products we consume and use, our transport systems, national infrastructure, from domestic appliances to commercial and healthcare applications. Advances in engineering are used to solve global challenges such as energy use, addressing and adapting to a changing climate and related challenges of population growth in a world of finite resource. All engineered products and systems must be manufactured by competent engineering technicians so that they function as intended, meet specifications, exact tolerances and regulatory requirements, with the minimum use of resources, ensuring optimal service life of systems and components.

Engineers solve problems. Therefore all careers require a good technical understanding of manufacturing processess, material properties and the ability to safely apply practical skills; whether using tools, machines, or hand skills in the workshop environment. Engineers must have

excellent communication and team working abilities. To progress in engineering manufacturing, processing and control you will apply your strong foundation in engineering maths and science, to interpret information such as drawings, specifications to manufacture products to precise specifications and tolerances, test and carry out quality control on finished products.

Who is this Technical Qualification for?

This Technical Qualification can only be taken as part of a T Level course and is not available as a stand-alone qualification. It is for post-16 students and is ideal if you are intending to progress directly to employment in Engineering, in particular in manufacturing, processing and control - specific roles such as Engineering Fitter, Machining Technician, Maritime Electrical Fitter, Maritime Mechanical Fitter, Metal Fabricator, Surface Finisher.

Fabrication, Fitting and Machining are also essential skills in related apprenticeships such as Engineering and Manufacturing Support Technician, Marine Engineer or Aerospace Engineering Technician. This could be achieved by entering directly into employment as an apprentice or via further study of a Higher National Certificate or Degree in Engineering

What does the Technical Qualification cover?

The content is split into a core component common to all three Engineering Technical Qualifications. For Maintenance, Installation and Repair, there is a choice of one of four occupational specialisms. The specialisms are:

- Fitting and Assembly Technologies
- Machining and Toolmaking Technologies
- Fabrication and Welding Technologies

The core covers a broad understanding of Engineering principles, you will learn how to solve both mechanical and electrical problems using mathematical techniques, understand relevant scientific concepts and you will gain an understanding of engineering processes, materials, the broader industry, commercial considerations and quality, sustainability, technology and health and safety in the industry.

You will then undertake a short employer-set project where you respond to a brief, propose a design solution, develop and communicate that solution.

In year two each occupational specialism will cover the following skills, as applied specifically to a Fitting/ Assembly, Machining/ Toolmaking or Fabrication/ Welding context:

- Analyse and interpret specifications, processing requirements, resources, materials and technical information

- Plan and prepare processes, tools equipment and resources needed to produce engineered products.
- Produce relevant products considering the requirements of the brief and raw materials using relevant methods and processes
- Support the delivery and management of manufacturing projects, evaluating and reviewing outcomes and identifying process improvements
- Communicate product information, proposals and solutions using relevant technical documents, reports and representations

What could this Technical Qualification lead to?

Achieving this qualification will provide several progression routes:

Directly into employment:

- A relevant Level 3 apprenticeship: Examples include Machining Technician, Metal Fabricator, Surface Finisher, Engineering Technician, Aircraft Maintenance Technician, Engineering Fitter, Maritime Electrical or Mechanical Fitter, Engineering and Manufacturing Support Technician, Marine Engineer, Aerospace Engineering Technician

- A relevant Level 4 apprenticeship for example Process Leader, Engineering Manufacturing Technician, Nuclear Welding Inspection Technician

- A Degree Apprenticeship in related disciplines including Engineer, Aerospace Engineer, Manufacturing Manager.

Higher level study:

A Higher Technical Qualification (HTQ). Like T Levels, HTQs are developed in consultation with employers. They are qualifications at levels 4 and 5 and prepare you for occupations at these levels. For example the Pearson Higher National Certificate Level 4 in Engineering for England

Degrees:

Some of the common degrees this T Level aids progression onto include

- Engineering
- Manufacturing Engineering
- Industrial Engineering

Subject to acceptance of the T Level by the individual HE institution. It's essential that you check entry requirements with universities or colleges.

Who supports this Technical Qualification?

TBC

Further Information

Further information about this Technical Qualification can be accessed at:

https://qualifications.pearson.com/en/qualifications/t-levels.html

The T Level Technical Qualification in Engineering, Manufacturing Processing and Control will be approved and managed by Skills England. Pearson is currently authorised by Skills England to design and deliver the Technical Qualification from 2027.

For further information on the other components please see the DfE website at:

www.gov.uk/government/publications/introduction-of-t-levels/introduction-of-t-level