

Purpose statement

The following purpose is for the **City & Guilds Level 2 Technical Certificate in Engineering (603/0294/X)**.

Area	Description
OVERVIEW	
Who is this qualification for?	<p>This qualification is for you if you are aged 16-19 and want to work in the Engineering and Manufacturing sectors.</p> <p>If you like to explore how simple components and complex machines are designed, made or maintained and are keen to develop practical, technical skills, then this qualification is for you.</p>
What does this qualification cover?	<p>This qualification allows you to focus on one of four specialist pathways. The following mandatory content is included in each pathway:</p> <p>Principles of Engineering – this allows you to understand the basic principles of mathematics, science and materials that are important wherever you work in engineering.</p> <p>Engineering Workshop Practice – this allows you to recognise and use safe working practices, develop the knowledge and skills for producing components for assembly using appropriate tools, different materials and inspection techniques.</p> <p>Business Improvement Principles – this will provide you with an understanding of how an engineering business is built up, functions and achieves commercial success. You will learn how to communicate effectively and gain knowledge of business improvement approaches.</p> <p>The four specialist pathways are:</p> <ol style="list-style-type: none"> 1. Fabrication and Welding – you will gain an understanding of the welding processes and how to weld. You will also learn how to use fabrication equipment and perform cutting of metals. 2. Maintenance – you will gain an understanding of mechanical, electrical and fluid power systems and how these are maintained. Also why planned maintenance is important and the different types of maintenance. 3. Manufacturing Technologies – you will gain an understanding of what CAD/CAM is and the importance to manufacturing, produce components through manual machining and CNC machines. 4. Electronics – you will gain an understanding of electronic components, be able to assemble and interconnect electronic circuits, test electronic components and understand why automation is used.

Centres and providers work with local employers who will contribute to the knowledge and delivery of training. The different ways in which centres could support your learning, by working with both local and national engineering and manufacturing employers, include:

- structured work-experience or work-placements within their business
- your attendance at classes or lectures given by industry experts
- employers input into projects and exercises, or are involved with setting assessments and examinations
- employers who act as 'expert witnesses' to contribute to the assessment of your work.

This practical based training is ideal preparation for gaining employment in engineering and manufacturing sectors or further specialist study.

WHAT COULD THIS QUALIFICATION LEAD TO?

Will the qualification lead to employment, and if so, in which job role and at what level?

Depending upon the pathway chosen, this qualification provides opportunities to gain employment, including an apprenticeship, in job roles such as:

Fabrication and Welding

- Sheet metal fabricator
- General welder

Maintenance

- Production setter
- Mechanical maintenance fitter

Manufacturing Technologies

- Tool room operative
- CNC operator

Electronics

- Electronics equipment assembler
- Electronics systems installer

Why choose this qualification over similar qualifications?

There are no other qualifications within this suite at this Level.

Will the qualification lead to further learning?

Your understanding and skills can be developed further through progression to other qualifications and apprenticeships, these include:

- The Intermediate apprenticeship in Improving Operational Performance
- The Advanced apprenticeship in Engineering Manufacture

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- Level 3 Advanced Technical Certificate in Engineering
 - Level 3 Advanced Technical Diploma in Engineering (540)
 - Level 3 Advanced Technical Extended Diploma in Engineering (720)
 - Level 3 Diploma in Food and Drink Engineering Maintenance

WHO SUPPORTS THIS QUALIFICATION?

Employer

The qualification is supported by:

- Manufacturing Technologies Association
- BID Group Ltd

FURTHER INFORMATION

Please refer to the Qualification Handbook, available on the City & Guilds website, for more information on the structure of this qualification, the content of the units, and assessment.
