

ENGINEERING Foundation Technical Level

Qualification Level 3 Foundation Technical Level in Engineering

Exam Board AQA

Course Specific Entry Requirements. If you study GCSE Product Design, you must achieve a Grade C or above. If you study BTEC Engineering, you must achieve a Merit or above

Overview

A recent study, commissioned by the Royal Academy of Engineering, found that British industry has a significant shortage of graduates in engineering and engineering technicians. This Engineering qualification is designed for 16 to 19 year-old learners in full-time education who are interested in pursuing a career in the engineering sector and who are interested in engineering technology. The AQA Foundation Technical Level in Engineering will give you the opportunity to learn and understand the core principles and technologies that underpin modern engineering. It will provide you with opportunities to develop sound practical engineering investigation, design, construction, and testing skills which are critical to being a good technician or incorporated engineer. This course has been developed in close collaboration with employers and professional bodies, ensuring that it has both recognition and value. The purpose of the course is to encourage you to develop the core specialist knowledge, understanding and skills required by the engineering sector. AQA has worked with employers and professional bodies in the design and content of this qualification to ensure that it covers all the knowledge and skills that you will need to gain the core underpinning knowledge, understanding and skills needed for progression into employment or further study.

What will I learn?

You will complete four units and all of the units in this qualification are mandatory. One of the units is examined and one is an externally marked practical assignment. The other two units are internally set and marked by your teacher. The industrial focus for the learning (and assessment of the internally assessed units) can be contextualised around any engineering sector or employer to suit the needs of the learners. The four units are:

- ▲ **Materials Technology and Science:** the purpose of this unit is to develop your understanding of the materials used in engineering products and the scientific principles engineers use to identify which materials are the most suitable for use in a given engineering context.
- ▲ **Mechanical Systems:** the purpose of this unit is to give learners a practical understanding of mechanical systems. This includes different types of mechanical systems and their typical applications, how these systems are designed, and how they and their component parts function.
- ▲ **Engineering Design:** this unit will develop your understanding of the engineering design process and will use industry standard tools and techniques to deliver an engineering design from start to finish.
- ▲ **Production and Manufacturing:** the purpose of this unit is to provide learners with an understanding of the range of manufacturing processes and systems relevant to the production of multiple components. The learner will develop a production plan, schedule the production and work as part of a team to manufacture the batch of products.

How will I learn?

Lessons are designed to encourage active student participation and develop transferable skills that are valued by employers and Higher Education alike. In order to be successful, you will need to have a keen interest in the world of engineering and be prepared to read around the subject content to consolidate your learning.

Where could it lead?

This qualification could lead to further study in engineering, or you might proceed into an engineering-related apprenticeship or employment.