



Purpose statement

**NCFE Level 1/2 Technical Award in Engineering
QN: 603/2963/4**

Who is this qualification for?

This qualification is designed for learners who want an introduction to engineering that includes a vocational and project-based element. The qualification will appeal to learners who wish to pursue a career in the engineering sector or progress to further study.

The NCFE Level 1/2 Technical Award in Engineering complements GCSE qualifications. It is aimed at 14–16 year olds studying Key Stage 4 curriculum who are interested in the engineering industry. This qualification is designed to match the rigour and challenge of GCSE study. The qualification is graded Level 1 Pass/Merit/Distinction/Distinction* and Level 2 Pass/Merit/Distinction/Distinction* (equivalent to GCSE grades 8.5–1). More information on grading can be found in Section 2.

This Level 1/2 qualification is appropriate for learners who are looking to develop a significant core of knowledge and understanding in engineering and be able to apply their learning.

This qualification has been designed to sit alongside the requirements of core GCSE subjects and is appropriate for learners who are motivated and challenged by learning through hands-on experiences and through content which is concrete and directly related to those experiences.

It is distinct from GCSE Engineering, as it encourages the learner to use knowledge and practical tools to focus on developing transferrable skills in practical engineering accompanied by the theoretical knowledge to help with progression into employment and onto further education.

The study of engineering is the application of maths and science to solve real world problems. This involves an understanding of the different disciplines of engineering and how they have shaped the products and projects of the modern world. Learners will be able to read technical drawings, select appropriate materials along with tools and machinery, and know how to carry out a practical task, working in a safe manner in line with current health and safety legislation.

The qualification focuses on an applied study of the engineering sector and learners will gain a broad understanding and knowledge of working in the sector.

What will the learner study as part of this qualification?

This qualification shows learners how to:

- understand engineering disciplines
- understand how science and maths are applied in engineering
- understand how to read engineering drawings
- understand properties and characteristics of engineering materials and know why specific materials are selected for engineering applications
- understand engineering tools, equipment and machines
- produce hand-drawn engineering drawings
- produce Computer Aided Design (CADD) engineering drawings
- demonstrate production planning techniques
- demonstrate processing skills and techniques applied to materials for a manufacturing task
- understand how to create, present and review art and design work

The disciplines that a learner will study within the qualification include:

- mechanical
- electrical and electronic
- aerospace
- communications
- chemical
- civil
- automotive
- biomedical
- software.

If you wish to offer an engineering discipline which does not appear in the above list, please contact our Quality Assurance team on 0191 239 8000 for further information.

What knowledge and skills will the learner develop as part of this qualification and how might these be of use and value in further studies?

Learners will develop skills and knowledge:

- in adapting their own ideas and responding to feedback
- in evaluating their own work
- analysing data and making decisions
- that are essential for the engineering sector, such as understanding how to read drawings; responding to data; independent working; working to deadlines; efficient use of resources
- practical application of tools and machinery, whilst adhering to health and safety legislation and guidance
- an appreciation of materials technology and applications.

The knowledge and skills gained will provide a secure foundation for careers in the engineering industry.

Which subjects will complement this course?

The following GCSE subject areas will complement this qualification by further broadening application of engineering skills in the context of engineering:

- design and technology
- manufacturing
- maths
- English
- science.

This list is not exhaustive and a range of other subject areas may also be appropriate.

This qualification is not part of a subject suite.

Progression opportunities - what could this qualification lead to?

Depending on the grade the learner achieves in this qualification, they could progress to Level 2 and Level 3 qualifications and/or GCSE/A Levels.

Learners who achieve at **Level 1** might consider progression to Level 2 qualifications post-16, such as:

- a GCSE in Engineering
- study at Level 2 in a range of technical routes that have been designed for progression to employment, apprenticeships and further study. An example might include the Level 2 Technical Certificate in Engineering. Technical certificate qualifications provide post-16 learners with the knowledge and skills they need for skilled employment or for further technical study.

Learners who achieve at **Level 2** might consider progression to Level 3 qualifications post-16 such as:

- Level 3 Applied General in Engineering. This qualification prepares learners for progression to higher education in the engineering sector
- Level 3 Technical Level National Foundation Diploma in Engineering. This qualification prepares learners for progression into employment or onto an apprenticeship through specialising in a technical occupation in the engineering sector. Technical Level qualifications provide post-16 learners with the knowledge and skills they need for skilled employment or for further technical study
- A Levels in Maths, Further Maths, Biology, Chemistry, Physics, and Design and Technology. These will support progression to higher education
- learners could progress into employment or onto an apprenticeship
- This qualification will also prepare learners for recruitment into the armed forces in the Army, Royal Air Force or the Royal Navy.

The understanding and skills gained through this qualification could be useful to progress onto an apprenticeship in the engineering sector through a variety of occupations which are available within sectors such as an Aerospace Software Development Engineer, Aircraft Maintenance Certifying Engineer, Automotive Engine Test Engineer and Food and Drink Engineer.