



Level 1 Foundation Certificate in **ENGINEERING TECHNOLOGY**

Qualification Specification

Overview

This qualification has been developed predominantly for young people aged 14-16 in full time education who are interested in engineering and would like to acquire a basic level of knowledge and understanding about the engineering sector.

Typical Job

Mechanical Fitter, Maintenance Engineer, Manufacturing Engineer, Electrical Engineer, Electronics Engineer, Sheet Metal Worker, CNC Operator, Welder.

Qualification code:	601/4560/2
Level:	1
Guided learning hours:	Min 160 - Max 160
Minimum learning age:	14

Purpose of qualification

This qualification has been specifically designed to offer progression into the EAL Level 2 First Certificate and Level 2 First Diploma in Engineering Technology. It gives learners a broad introduction to the practices and processes of engineering technology. It covers basic knowledge, understanding and skills that are relevant to a wide variety of careers and study routes and takes a hands-on approach to basic engineering training by providing learners with:

- Experience and understanding of a range of potential careers in the engineering sector
- Information that will help them make more informed decisions about their post-16 options
- Personal skills to help them work effectively and achieve their potential
- Transferable skills and skills that are not widely advanced through the traditional academic curriculum, which are applicable to a wide variety of contexts and learning objectives.

The qualification can be delivered in a school, college or other learning provider using a combination of practical workshops and theory sessions. It will compliment GCSEs and other relevant qualifications in subjects such as science, technology and mathematics, when offered as part of a Key Stage 4 learning programme.

What does this qualification cover?

This qualification has one core mandatory unit, which provides learners with an introduction to working in the engineering sector, and 25 optional units, from which a learners will select three from the qualification units and structure listed on pages 3 and 4.

Who is this qualification for?

This qualification is predominantly for learners in full time education who are interested in engineering and would like to gain a basic level of knowledge and understanding about the engineering sector. The qualification may also be suitable for learners who are interested in engineering technology and/or are considering a career change. The qualification has been specifically designed to offer progression into a higher level of study or an Apprenticeship.

It is suitable for learners aged:

- 14-16
- 16-18
- 19+

Who supports this qualification?

This qualification is:

- Accredited at Level 1 of the Qualifications and Credit Framework (QCF)
- Endorsed by a number of post-16 providers as facilitating progression to a range of Engineering Apprenticeships or a range of post-16 learning programmes at level 2 and 3.

What could this qualification lead to?

Typical job roles include:

Mechanical Fitter, Maintenance Engineer, Manufacturing Engineer, Electrical Engineer, Electronics Engineer, Sheet Metal Worker, CNC operator, Welder.

The qualification also provides progression into the following engineering qualifications at level 1 and 2:

- EAL Level 1 NVQ Certificate in Performing Engineering Operations (QCF)
- EAL Level 2 NVQ Diploma in Performing Engineering Operations
- EAL Level 2 Certificates and Diplomas in Engineering and Technology subjects, such as mechanical, electrical, welding, maintenance, and plumbing
- Further EAL level 2 engineering and manufacturing competence qualifications

Entry requirements

Learners must be at least 14 years old. There are no formal entry requirements for this qualification. However, learners must have the potential to achieve all aspects of the qualification. In particular, learners should be able to demonstrate that they have the minimum levels of literacy and numeracy required to comply with the health and safety aspects of the scheme, the completion of the learning outcomes, and the assessments.

How is the qualification achieved?

This qualification will be achieved when the learner has successfully completed:

- an externally set and marked examination
- Centre marked practical and/or theory assessment
- Final synoptic assessment

What will be assessed?

This qualification is made up of units to which appropriate assessment methods have been applied. The units contain the learning outcomes and the assessment criteria that the learner is to be assessed against.

All learning outcomes within the qualification will be assessed. In order to meet this requirement, it is advised that centres should maintain an assessment and feedback record for each learner. This will detail the evidence evaluated against the learning outcome and the feedback given to the learner. All learner evidence must be available to the EAL External Verifier.

Grading Criteria

Learners must achieve a Pass in ALL components for the qualification to be awarded. If learners are unsuccessful in one or more of the assessment components then the overall result for the qualification will be 'referred' and a certificate will not be awarded.

Providing learners are successful in ALL assessment components, the final grade for the qualification will be determined from the mark achieved by learners in the external examination within the one mandatory unit and the mark achieved from the synoptic assessment.

In accordance with DfE requirements relating to Vocational Qualifications for 14-16 year olds, learners that are unsuccessful in passing external assessments (set by EAL, marked by EAL) on the first attempt will be permitted ONE re-take using new assessment provided by EAL.

Please refer to the Grading Criteria within Section 8 of the Qualification Manual for further information on how to grade the qualification.

How will it be assessed?

Assessment methods within this qualification include an on-screen multiple choice examination for the mandatory unit and a Centre marked practical and theory assessments for the optional units. Assessment methods have been designed to assess the knowledge, understanding and skills of learners for both units.

The on-screen multiple choice examination is set by EAL and marked by EAL. The internal assessment is set by EAL and marked by members of the delivery team at the Centre.

Where the assessment takes the form of written/short answer or multiple choice question papers, these must be treated as controlled assessments.

All assessment decisions are then subject to internal and external quality assurance.

Structure

This qualification will be awarded to learners once they have completed the required assessments for the mandatory unit, THREE of the optional units and the synoptic assessment.

Achievement of the qualification will require at least 160 Guided Learning Hours (GLH) of which 40 GLH (25 %) will be from the mandatory units and 120 GLH (75 %) will be from the optional units.

Mandatory unit:

Unit	Unit title	Level	GLH	Ofqual Code
NETF/001	Introduction to Working in Engineering	1	40	D/506/4890

Optional units - select three of the following units:

Unit	Unit title	Level	GLH	Ofqual Code
NETF/002	Introduction to Machining Engineering Materials	1	40	H/506/4891
NETF/003	Introduction to Cutting, Forming and Assembling Engineering Materials	1	40	M/506/4893
NETF/004	Introduction to Joining Engineering Materials	1	40	F/506/4896
NETF/005	Introduction to Electronics	1	40	L/506/4903
NETF/006	Introduction to Electrical Installation	1	40	D/506/4906
NETF/007	Introduction to Mechanical and Electrical Maintenance	1	40	H/506/4910
NETF/008	Introduction to Computer Maintenance	1	40	T/506/4913
NETF/009	Introduction to Motor Cycle Maintenance	1	40	A/506/4914
NETF/010	Introduction to Motor Vehicle Maintenance	1	40	F/506/4915
NETF/011	Introduction to Cycle Maintenance	1	40	R/506/4921
NETF/012	Introduction to Automated Technologies	1	40	Y/506/4922
NETF/013	Introduction to Basic Maths and Science used in Engineering	1	40	H/506/4924
NETF/014	Introduction to Working With Customers	1	40	K/506/4925

Optional units *continued*

Unit	Unit title	Level	GLH	Ofqual Code
NETF/015	Introduction to Computer Aided Drawing (CAD)	1	40	Y/506/5293
NETF/016	Introduction to Computer Aided Machining (CAM)	1	40	M/506/4926
NETF/017	Introduction to Engineering Project Planning	1	40	T/506/4927
NETF/018	Introduction to Cutting, Forming and Assembly of Pipework Materials	1	40	A/506/4928
NETF/019	Introduction to Cutting, Jointing and Finishing Wood	1	40	F/506/4929
NETF/020	Introduction to Tungsten Inert Gas Welding	1	40	T/506/4930
NETF/021	Introduction to Metal Inert Gas Welding (MIG/MAG)	1	40	A/506/4931
NETF/022	Introduction to Manual Metal Arc Welding	1	40	F/506/4932
NETF/023	Introduction to Oxy-Acetylene Welding	1	40	J/506/4933
NETF/024	Introduction to Brazing and Soldering	1	40	K/508/4916
NETF/025	Introduction to Thermal Cutting Techniques	1	40	M/508/4917
NETF/026	Introduction to Additive Manufacturing (3D Printing)	1	40	T/508/4918