



Level 2 First Certificate in **ENGINEERING TECHNOLOGY**

Qualification Specification

Overview

This qualification has been developed to provide learners with an intermediate knowledge of the practices and processes of engineering technology. It covers knowledge, understanding and skills that are relevant to a wide variety of careers and study routes and take a hands-on approach to engineering training.

Typical Job

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

Qualification code:	600/6867/X
Level:	2
Total qualification time:	250
Guided learning hours:	Min 230 - Max 230
Minimum learning age:	14

Purpose of qualification

The Level 2 First Certificate will give learners a broad introduction to the practices and processes of engineering technology. The qualification covers knowledge, understanding and skills that are relevant to a wide variety of careers and study routes and take 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.
- Transferable skills and skills that are not widely advanced through the traditional academic curriculum.

This is a graded qualification; learners can achieve a Pass, Merit or Distinction.

What does this qualification cover?

This qualification has three core mandatory units, which provides learners with knowledge of the engineering environment, techniques and principles within the engineering sector, and thirty nine optional units, from which a learners will select one from the qualification structure listed on pages 3-4.

Who is this qualification for?

The EAL Level 2 First Certificate in Engineering Technology is predominantly for young people aged 14-16 in full time education who are interested in engineering and would like to acquire an intermediate level of knowledge and understanding about the engineering sector. The qualification may also be suitable for other learners, including adults, who are interested in engineering technology and/or are considering a career change.

It is suitable for learners aged:

- 14-16
- 16-18
- 19+

Who supports this qualification?

This qualification is:

- Regulated by Ofqual at Level 2
- Endorsed by a number of post-16 providers as facilitating progression to 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.

This qualification relates to:

- EAL Level 1 NVQ Certificate in Performing Engineering Operations
- EAL Level 2 NVQ Diploma in Performing Engineering Operations
- EAL Level 2 Certificates and Diplomas in Engineering Technologies subjects, such as mechanical, electrical, welding, maintenance, and plumbing
- Further EAL level 3 Certificates and Diplomas in Engineering Technologies subjects.

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:

- Three core mandatory unit, comprising an on-screen multiple-choice examination
- One optional unit, comprising Centre marked practical/theory assessments.

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 Quality Assurer.

Grading Criteria

Internal assessments are graded only as 'Pass' or 'Referred'. However, learners have the opportunity to achieve a Pass, Merit or Distinction for the overall qualification.

Learners must achieve a Pass in ALL components for the qualification to be awarded (this includes internal AND external assessments) - 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 marks achieved by learners in the external examinations and the synoptic assessment.

Please refer to the Grading Criteria within the Delivery Packs and Assessment Packs on how to grade individual units.

EAL will monitor the qualification standard and reserves the right to make appropriate adjustments to grade thresholds in order to maintain this standard.

How will it be assessed?

Assessment methods within this qualification include an on-screen multiple choice examination for the mandatory units 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 all units.

The on-screen multiple choice examination is set by EAL and marked by EAL. The internal assessments are 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 THREE mandatory units, ONE of the optional units, and the synoptic assessment

The qualification has 230 Guided Learning Hours and 250 hours Total Qualification Time (TQT).

Mandatory Units – All units must be completed:

EAL Code	Unit title	Level	GLH	Ofqual Code
NETI/001	Engineering environment awareness	2	60	K/504/3606
NETI/002	Engineering techniques	2	60	M/504/3607
NETI/003	Engineering principles	2	60	T/504/3608

Optional units - select ONE of the following units:

EAL Code	Unit title	Level	GLH	Ofqual Code
NETI/004	Electrical and electronic principles	2	50	M/504/3610
NETI/005	Electrical and electronic testing methods	2	50	A/505/3612
NETI/006	Electrical and electronic systems and devices	2	50	F/504/3613
NETI/007	Fabrication and welding techniques	2	50	J/504/3614
NETI/008	Manual welding techniques	2	50	L/504/3615
NETI/009	Producing components from metal plate	2	50	R/504/3616
NETI/010	Producing components from sheet metal	2	50	Y/504/3617
NETI/011	Non-fusion thermal joining methods	2	50	D/504/2618
NETI/012	Thermal cutting techniques	2	50	H/504/3619
NETI/013	Engineering maintenance safety practices	2	50	Y/504/3620
NETI/014	Engineering maintenance techniques	2	50	D/504/3621
NETI/015	Engineering maintenance planning	2	50	H/504/3622
NETI/016	Engineering materials processes	2	50	K/504/3623
NETI/017	Fitting and assembly techniques	2	50	M/504/3624

Optional units - select ONE of the following units (continued):

Unit	Unit title	Credit	GLH	Ofqual Code
NETI/018	Turning and milling techniques and technology	2	50	T/504/3625
NETI/019	Turning techniques	2	50	A/504/3626
NETI/020	Milling techniques	2	50	F/504/3627
NETI/021	Grinding techniques	2	50	J/504/3628
NETI/022	Personal computer (PC) maintenance methods	2	50	L/504/3629
NETI/023	Electrical installation methods, wiring and circuit protection	2	50	F/504/3630
NETI/024	Basic electrical circuit inspection, testing and fault diagnosis	2	50	J/504/3631
NETI/025	Building services pipework fixing, bending and jointing methods	2	50	L/504/3632
NETI/026	Building services pipework systems	2	50	R/504/3633
NETI/027	Installation and servicing of refrigeration equipment	2	50	Y/504/3634
NETI/028	Installation and servicing of air-conditioning equipment	2	50	D/504/3635
NETI/029	Installation of security systems	2	50	H/504/3636
NETI/030	Security installation design	2	50	K/504/3637
NETI/031	Motor vehicle maintenance safety practices	2	50	T/504/3639
NETI/032	Motor vehicle maintenance techniques	2	50	K/504/3640
NETI/033	Motor vehicle maintenance planning	2	50	T/504/3642
NETI/034	Understanding Computer Aided Drawing (CAD)	2	50	A/504/3643
NETI/035	Applied mathematics in engineering	2	50	H/615/0485
NETI/036	Business improvement techniques	2	50	M/615/0487
NETI/037	Leading a team in engineering	2	50	A/615/0489
NETI/038	Plan and carry out a project in engineering	2	50	T/615/0491
NETI/039	Engineering manufacturing techniques	2	50	A/615/0492
NETI/040	Engineering design techniques	2	50	F/615/0493
NETI/041	Marketing an engineering product	2	50	J/615/0494
NETI/042	Additive manufacturing (3D printing)	2	50	L/615/0495