



Level 2 First Diploma 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: | 600/6868/1 |
| Level: | 2 |
| Total qualification time: | 390 |
| Guided learning hours: | Min 330 - Max 330 |
| Minimum learning age: | 14 |

Purpose of qualification

The Level 2 First Diploma will provide learners with an opportunity to allow them to study additional topics that will help them make more informed choices about future progression by increasing their awareness and understanding of engineering.

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 three from the qualification structure listed on pages 3-4.

Who is this qualification for?

The EAL Level 2 First Diploma 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:

- Accredited 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 units, comprising an on-screen multiple-choice examination
- Three optional units, 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.

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, THREE of the optional units, and the synoptic assessment

The qualification has 330 Guided Learning Hours and 390 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 THREE 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 THREE 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 |