



Level 3 Diploma in **MECHANICAL ENGINEERING TECHNOLOGY**

Qualification Specification

Overview

This qualification has been developed to provide learners with an advanced knowledge and understanding of the practices and processes of mechanical engineering. It covers knowledge, understanding and skills that are relevant to a career in mechanical engineering and take a hands-on approach to engineering training.

Typical Job

Mechanical Fitter, Maintenance Engineer, Manufacturing Engineer.

Qualification code:	501/1155/3
Level:	3
Credit value:	78
Total qualification time:	780
Guided learning hours:	600
Minimum learning age:	16

Purpose of qualification

The EAL Level 3 Diploma in Mechanical Engineering Technology is a Vocational Related Qualification (VRQ). It covers the advanced knowledge, understanding and skills that are required by someone working in the engineering industry. It takes a hands-on approach to engineering training by providing learners with:

- Knowledge and understanding of a range of engineering competencies.
- Information that will help them make more informed decisions about their career options.
- Personal skills to help them work effectively and achieve their potential.

What does this qualification cover?

This qualification comprises two core mandatory units, which provides learners with knowledge and understanding of the engineering and environmental health and safety and engineering organisational efficiency and improvement, one pathway mandatory unit and 14 optional units, from which learners selects five from the structure listed on pages 3 - 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 an advanced level of knowledge and understanding about mechanical engineering. The qualification may also be suitable for learners who are interested in mechanical engineering and/or are considering a career change.

This qualification has been specifically designed to offer progression into a higher level of study or a Level 3 Apprenticeship.

It is suitable for learners aged:

- 16-18
- 19+

Who supports this qualification?

This qualification is:

- Accredited at Level 3
- 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 3 or above.

What could this qualification lead to?

Typical job roles include:

Mechanical Fitter, Maintenance Engineer, Manufacturing Engineer.

This qualification relates to:

- EAL Level 3 Certificates and Diplomas in Engineering Technology subjects, such as mechanical engineering.
- Further EAL level 3 engineering and manufacturing competence qualifications.

Entry requirements

Learners must be at least 16 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?

The EAL Level 3 Diploma in Mechanical Engineering Technology will be awarded when the learner has successfully completed:

- Two core mandatory units, comprising an on-screen multiple-choice examination
- One pathway mandatory unit, comprising Centre marked practical/theory assessments.
- Five of the 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

This qualification is graded pass or refer.

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 learner will achieve a pass in their qualification.

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 pathway mandatory unit and 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 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 obtained by the learner once they have successfully completed the **two mandatory units, one pathway mandatory unit** and **five optional units** from the units listed below.

The qualification has 78 credits and 600 Guided Learning Hours (GLH) and 780 hours Total Qualification Time (TQT).

Mandatory units - must be completed:

Unit	Unit title	Credit	GLH	Ofqual Code
QETA/001	Engineering and Environmental Health and Safety	9	75	T/602/0551
QETA/002	Engineering Organisational Efficiency and Improvement	9	75	J/602/0554

Pathway mandatory unit - must be completed:

Unit	Unit title	Credit	GLH	Ofqual Code
QETA/039	Mechanical Engineering Principles	10	75	A/602/1152

Optional units - select five of the following units:

Unit	Unit title	Credit	GLH	Ofqual Code
QETA/003	Advanced Mathematics (for those wishing to enter HE)	10	75	R/602/0556
QETA/005	Advanced Engineering Science (for those wishing to enter HE)	10	75	D/602/0558
QETA/006	Computer Aided Design (CAD) Techniques	10	75	H/602/0562
QETA/007	Computer Numerical Control (CNC) Programming/ machining	10	75	Y/602/0560
QETA/040	Toolmaking/Presswork /Extrusion	10	75	F/602/2979
QETA/041	Advanced Manufacture Techniques - Computer Numerical Control (CNC)	10	75	A/602/2981

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Optional units - continued:

Unit	Unit title	Credit	GLH	Ofqual Code
QETA/042	Engineering Inspection and Quality Control	10	75	F/602/1153
QETA/043	Engineering Design Process	10	75	J/602/1154
QETA/044	Precision Grinding	10	75	L/602/1155
QETA/045	Gear Cutting	10	75	R/602/1156
QETA/046	Advanced Milling	10	75	Y/602/1157
QETA/047	Advanced Turning	10	75	D/602/1158
QETA/048	Specialised Machining	10	75	H/602/1159
QETA/049	Advanced Manufacture Techniques – Computer Aided Manufacture (CAM)	10	75	Y/602/1160