



Level 2 Diploma in Advanced Manufacturing (Foundation Knowledge)

Qualification Specification

Overview

This qualification has been developed to provide learners with an intermediate knowledge and understanding of the practices and processes of a range of machining techniques. 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 machining training.

Typical Job

Machinist within the Advanced Manufacturing and Engineering sector

Qualification code:

601/90/34/6

Level:

2

Credit value:

Min 46 - Max 48

Guided learning hours:

Min 460 - Max 480

Minimum learning age:

14



Purpose of qualification

What is this qualification?

The EAL Level 2 Diploma in Machining is a Vocational Related Qualification (VRQ). It will give learners knowledge and understanding of a range of machining techniques. The qualifications cover the intermediate knowledge, understanding and skills that are required by someone working in the machining sector. It takes a hands-on approach to foundation machining training by providing learners with:

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

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

What does this qualification cover?

This qualification has five mandatory units, which provides learners with knowledge of the engineering environment, techniques and principles within the machining sector, and eight optional units, from which a learners will select a minimum of two units within their choice of units equating to a minimum of 7 units in total.

This qualification is a level 2 Diploma and has a minimum Credit Value (CV) of 46 and a Maximum of 48 which equates to Total Qualification Time (TQT) values of a minimum TQT of 460 and a maximum TQT of 480.

Who is this qualification for?

This qualification is predominantly for learners completing the foundation phase of the level 3 Machinist - Advanced Manufacturing Engineering apprenticeship standard or in full time education who are interested in machining and would like to gain an intermediate level of knowledge and understanding about the machining sector. The qualification may also be suitable for learners who are interested in machining techniques 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 the qualification?

This qualification is:

- Accredited at Level 2 of the Regulated Qualifications Framework (RQF)
- Endorsed by employers as facilitating completion of the foundation knowledge appropriate for the machining - Advanced manufacturing Engineering sector.

What could this qualification lead to?

Typical job roles include:

Machinist within the Advanced Manufacturing and Engineering sector: including Manual and CNC machining, Milling, Turning, Fabrication, grinding, Computer Aided Design (CAD)

This qualification relates to:

- 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 Technologies
- EAL Level 2 Diploma in Advanced Manufacturing & engineering (foundation competence)
- 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:

- Five core mandatory unit, comprising an on-screen multiple-choice examination and Centre marked practical/theory assessments.
- Two 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 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 grades achieved by learners in the external examination within the mandatory units and the centre marked assessments within the optional units.

Please refer to the Grading Criteria within the Delivery Packs and Learner 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 three of the mandatory units and Internal centre marked practical and theory assessments for the remaining two mandatory units 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 all **five mandatory units** and **two units** from the listed of optional units.

The qualification has a minimum credit value of 46 credits and a maximum credit value of 48 credits

The qualification has a minimum of 460 GL(hrs) and a maximum of 480 GL(hrs) (GL = Guided Learning).

Barred combination(s):

If unit 6 is chosen within the optional units then units 7 or 8 cannot be selected

If either of unit 7 or unit 8 are chosen within the optional units then unit 6 cannot be selected

If unit 10 is chosen within the optional units then units 11 and 12 cannot be selected

If either of unit 11 or unit 12 is chosen within the optional units then unit 10 cannot be selected

Mandatory Units: All five mandatory units must be completed

EAL Code	Assessment Route Title	Credit	GL(hrs)	Ofqual Code
AME2/001	Working in an Engineering Environment	6	60	J/508/6186
AME2/002	Engineering Techniques - AME	6	60	L/508/6187
AME2/003	Engineering mathematics and science principles	6	60	R/508/6188
AME2/004	Fitting and Assembly Techniques - AME	7	70	Y/508/6189
AME2/005	Business Improvement Techniques	7	70	Y/508/6192

Optional Units: A minimum of two optional units must be completed from the following:

EAL Code	Assessment Route Title	Credit	GL(hrs)	Ofqual Code
AME2/006	Principles of Turning & Milling	8	80	H/508/6194
AME2/007	Manual Turning Techniques	7	70	K/508/6195
AME2/008	Manual Milling Techniques	7	70	M/508/6196
AME2/009	Grinding Techniques - AME	7	70	T/508/6197
AME2/010	Principles of Computer Numerical Control (CNC) Machining /Fabrication	8	80	A/508/6198
AME2/011	Computer Numerical Control (CNC) Turning Techniques	7	70	K/508/6200
AME2/012	Computer Numerical Control (CNC) Milling Techniques	7	70	M/508/6201
AME2/013	Computer Aided Drawing (CAD)	7	70	T/508/6202

