



Level 3 NVQ Diploma in

Engineering Toolmaking

ENGINEERING

Qualification Specification

Overview

This qualification is a National Vocational Qualification (NVQ). It involves the skills and knowledge needed for occupations in Engineering Toolmaking.

Typical Job

CNC Operator, Tool and Die maker

Qualification code:	600/1029/0
Level:	3
Total qualification time:	1050 hours
Guided learning hours:	316
Credits:	105
Minimum age:	16

Purpose of the qualification

This EAL qualification has been designed for those learners who:

- need recognition of their competence in one or more of a wide variety of Engineering Toolmaking activities and also need a nationally recognised qualification at level three
- are working in a Engineering Toolmaking environment and would like to work towards a relevant level three qualification,
- are new to Engineering Toolmaking but are looking for a career change and wish to develop new skills within the industry...

What could this qualification lead to?

This qualification supports learners to progress to higher level work and/or further study, such as an Advanced Apprenticeship or further EAL qualifications at Levels 3 or above, covering a full range of Engineering and Manufacturing applications.

Entry Requirements

Learners must have the potential to achieve the assessment criteria set out in the units.

How is the qualification achieved?

The learner must present evidence which clearly shows they have met the assessment criteria and learning outcomes.

What will be assessed?

All evidence submitted by the learner against the assessment criteria.

How will it be assessed?

Learners must complete a portfolio of work based evidence.

Structure

This qualification has 316 guided learning hours (GLH) and 105 credits. It has a total qualification time of 1050 hours which is the notional time required by the learner to complete the qualification. The learner must complete the **THREE** mandatory units, then select a **pathway** and then complete the relevant **mandatory** units and the required number of optional units for that pathway.

Mandatory units: Must be completed for ALL pathways:

EAL Code	Unit Title	Level	Credit	GLH	Ofqual Code
QETM2/001	Complying with statutory regulations and organisational safety requirements	2	5	35	A/601/5013
QETM2/002	Using and Interpreting Engineering Data and Documentation	2	5	25	Y/601/5102
QETM3/003	Working Efficiently and Effectively in Engineering	3	5	25	K/601/5055

Pathway ETA: Toolmaker

Complete ALL of the following units:

EAL Code	Unit Title	Level	Credit	GLH	Ofqual Code
QETM3/004	Assembling press tools	3	70	210	F/602/2562
QETM3/005	Assembling injection mould tools	3	70	210	L/602/2564
QETM3/006	Assembling blow mould tools	3	70	210	R/602/2565
QETM3/007	Assembling vacuum forming tools	3	70	210	K/602/2569
QETM3/008	Assembling dies	3	70	210	D/602/2570

Plus TWO of the following :

EAL Code	Unit Title	Level	Credit	GLH	Ofqual Code
QETM3/009	Producing/Finishing Mould, Press Tool or Die Components using Hand Fitting Techniques	3	70	210	H/602/2571
QETM3/010	Repairing or Modifying Mould, Press Tool or Die Components	3	70	210	L/602/2581
QETM3/011	Producing Mould, Press Tool or Die Components by Manual Machining	3	70	210	R/602/2582
QETM3/012	Checking that Toolroom Assemblies Comply with Specification	3	30	91	J/602/2644
QETM3/013	Handing Over and Confirming the Completion of Mould, Press Tool or Die Equipment	3	38	98	L/602/2645

Pathway ETB: Toolroom CNC Machining – complete the three mandatory units on page 6 PLUS

ONE of the following units:

EAL Code	Unit Title	Level	Credit	GLH	Ofqual Code
QETM3/017	Loading and Proving CNC Machine Tool Programs	3	24	91	Y/602/3006
QETM3/018	Carrying Out CNC Machine Tool Programming	3	84	231	H/602/3008

Plus ONE of the following :

EAL Code	Unit Title	Level	Credit	GLH	Ofqual Code
QETM3/019	Producing toolroom components using CNC turning machines	3	66	140	J/602/2658
QETM3/020	Producing toolroom components using CNC milling machines	3	66	140	T/602/2672
QETM3/021	Producing toolroom components using CNC grinding machines	3	66	140	A/602/2673
QETM3/022	Producing toolroom components using CNC laser profiling machines	3	66	140	F/602/2688
QETM3/023	Producing toolroom components using CNC electro discharge machines	3	66	140	F/602/2691
QETM3/024	Producing toolroom components using CNC machining centres	3	66	140	L/602/2693

Pathway ETC: Mould, Tool and Die Equipment Maintenance – complete the three mandatory units on page 6 PLUS

ALL of the following units:

EAL Code	Unit Title	Level	Credit	GLH	Ofqual Code
QETM3/025	Carrying Out Fault Diagnosis on Mould, Press Tool or Die equipment	3	49	56	R/602/2694
QETM3/026	Maintaining Mould, Press Tool or Die Equipment	3	70	119	Y/602/2695
QETM3/027	Handing Over and Confirming the Completion of Mould, Press Tool or Die Equipment Maintenance Activities	3	38	98	D/602/2696

Pathway ETC continued

Plus TWO of the following :

EAL Code	Unit Title	Level	Credit	GLH	Ofqual Code
QETM3/010	Repairing or Modifying Mould, Press Tool or Die Components	3	70	210	L/602/2581
QETM3/011	Producing Mould, Press Tool or Die Components by Manual Machining	3	70	210	R/602/2582
QETM3/014	Preparing and Setting Power Presses	3	91	210	K/602/2653
QETM3/028	Carrying Out Condition Monitoring of Mould, Press Tool or Die Equipment	3	39	77	K/602/2698
QETM3/029	Carrying Out Planned Maintenance on Mould, Press Tool or Die Equipment	3	38	70	M/602/2699
QETM3/030	Carrying Out Planned Maintenance on Power Presses	3	70	119	D/602/2777

Pathway ETD: Jig & Fixture Manufacture – complete the three mandatory units on page 6 PLUS

THREE of the following units:

EAL Code	Unit Title	Level	Credit	GLH	Ofqual Code
QETM3/031	Producing Jig and Fixture Components using Hand Fitting Techniques	3	70	210	J/602/2787
QETM3/032	Machining Components for Jigs and Fixtures	3	70	210	L/602/2788
QETM3/033	Fabricating Structural Components for Jigs and Fixtures	3	54	216	R/602/2789
QETM3/034	Assembling Jigs and Fixtures using Mechanical Methods	3	70	210	M/602/2802
QETM3/035	Assembling Jig and Fixture Structures using a Manual Welding Process	3	54	216	F/602/2805
QETM3/036	Carrying Out Repairs or Modifications to Jigs or Fixtures	3	70	210	L/602/2807
QETM3/012	Checking that Toolroom Assemblies Comply with Specification	3	30	91	J/602/2644

Pathway ETE: Toolroom Manual Machining - complete the three mandatory units on page 6 PLUS

Any PAIR of the following units:

EAL Code	Unit Title	Level	Credit	GLH	Ofqual Code
QETM3/037	Setting a Range of Machines to Produce Toolroom Components	3	164	378	Y/602/2809
QETM3/038	Machining Toolroom Components using a Range of Machines	3	139	294	H/602/2831

EAL Code	Unit Title	Level	Credit	GLH	Ofqual Code
QETM3/039	Setting Centre Lathes to Produce Toolroom Components	3	91	210	T/602/2834
QETM3/040	Machining Toolroom Components using Centre Lathes	3	77	161	A/602/2835

EAL Code	Unit Title	Level	Credit	GLH	Ofqual Code
QETM3/041	Setting Milling Machines to Produce Toolroom Components	3	91	210	J/602/2837
QETM3/042	Machining Toolroom Components using Milling Machines	3	77	161	F/602/2951

EAL Code	Unit Title	Level	Credit	GLH	Ofqual Code
QETM3/043	Setting Electro-Discharge Machines to Produce Toolroom Components	3	91	210	L/602/2953
QETM3/044	Machining Toolroom Components using Electro-Discharge Machines	3	77	161	Y/602/2955

EAL Code	Unit Title	Level	Credit	GLH	Ofqual Code
QETM3/045	Setting Grinding Machines to Produce Toolroom Components	3	91	210	D/602/2956
QETM3/046	Machining Toolroom Components using Grinding Machines	3	77	161	H/602/2957