



ETCAL Level 2 NVQ Diploma in Mechanical Manufacturing
Engineering
600/2653/4
Structure

Qualification aim

This qualification is designed to support those learners training in Mechanical Manufacturing Engineering, however, it is also available for individuals who are not following an apprenticeship. It provides a structured individualised route with knowledge and skills for those who wish to achieve a qualification in Mechanical Manufacturing Engineering.

Qualification introduction

This qualification is made up of 3 mandatory units that will help learners to develop an understanding of the knowledge and skills required as relevant to their capabilities and aspiration. Its mandatory units form a foundation to extend the understanding and skills in specific areas through the optional routes, in addition to these, learners are required to achieve additional units selected from a suite of 5 Pathways and in accordance with the achievement definition. Learners who complete the qualification will be equipped with the knowledge and skills to underpin career development within the industry.

Assessment

In order to achieve this qualification a learner must complete all units as mandatory. The assessment criteria determine the standard required to achieve each unit and allow for a variety of assessment methods to be used as appropriate to the environment the qualification is delivered in. There is no examined assessment element in this qualification.

Achievement

Learners must achieve a minimum of 54 credits to gain the qualification. 15 credits must be achieved by completing the 3 mandatory units and the remaining credits achieved by completing the required optional units from the suite of Pathways.

Qualification Number		600/2653/4
Qualification Framework		RQF
Title		ETCAL Level 2 NVQ Diploma in Mechanical Manufacturing Engineering
Qualification Level		Level 2
Total Qualification Time		540 TQT
Guided Learning Hours		215 GLH
Qualification Credit Value		54 Credits
Qualification Grading Structure		Pass / Fail

Unit Title	Mandatory/Optional	GLH	TQT	Credit Value	Grading
Mandatory Group – all units must be completed					
Complying with Statutory Regulations and Organisational Safety Requirements	M	35		5	Pass/Fail
Using and Interpreting Engineering Data and Documentation	M	25		5	Pass/Fail
Carrying Out Engineering Activities Efficiently and Effectively	M	25		5	Pass/Fail
Machine Operating - Must complete one of the following units:					
Operating Capstan or Turret Lathes	O	151		49	Pass/Fail
Operating Centre Lathes	O	151		49	Pass/Fail
Operating Single Spindle Automatic Turning Machines	O	130		39	Pass/Fail
Operating Multi-Spindle Automatic Turning Machines	O	130		39	Pass/Fail
Operating Milling Machines	O	151		49	Pass/Fail
Operating Single and Multi-Spindle Drilling Machines	O	151		49	Pass/Fail
Operating Grinding Machines	O	151		49	Pass/Fail
Operating Special-Purpose Machines	O	151		49	Pass/Fail
Operating Gear Cutting Machines	O	151		49	Pass/Fail
Operating Electro-Discharge Machines	O	151		49	Pass/Fail
Operating Honing and Lapping Machines	O	130		39	Pass/Fail
Operating Broaching Machines	O	130		39	Pass/Fail

Operating Shaping, Planing or Slotting Machines	O	151		39	Pass/Fail
Operating Gear Grinding Machines	O	151		49	Pass/Fail
Operating Power Presses	O	130		39	Pass/Fail
CNC Machine Operating - Must complete one of the following units:					
Operating CNC Turning Machines	O	130		39	Pass/Fail
Operating CNC Milling Machines	O	130		39	Pass/Fail
Operating CNC Grinding Machines	O	130		39	Pass/Fail
Operating CNC Punching Machines	O	130		39	Pass/Fail
Operating CNC Laser Profiling Machines	O	130		39	Pass/Fail
Operating CNC Electro-Discharge Machines	O	130		39	Pass/Fail
Operating CNC Gear Cutting Machines	O	130		39	Pass/Fail
Operating CNC Machining Centres	O	130		39	Pass/Fail
Production Assembly - Must complete one of the following units:					
Producing Mechanical Sub-Assemblies/Assemblies	O	151		49	Pass/Fail
Assembling Fluid Power Components to Mechanical Equipment	O	151		49	Pass/Fail
Assembling Electrical or Electronic Components to Mechanical Equipment	O	151		49	Pass/Fail
Assembling Pipework Components to Mechanical Equipment	O	151		49	Pass/Fail
Composite Manufacture - Must complete two of the following units:					
Producing Composite Mouldings using Wet Lay-Up Techniques	O	151		42	Pass/Fail
Producing Composite Mouldings using Pre-Preg Laminating Techniques	O	151		42	Pass/Fail
Producing Components by Acrylic Moulding	O	130		32	Pass/Fail
Vacuum Forming Composite Materials	O	130		32	Pass/Fail
Trimming Composite Mouldings using Hand Tools	O	130		32	Pass/Fail
Identifying Defects in Composite Mouldings	O	95		22	Pass/Fail
Carrying Out Repairs to Composite Mouldings	O	151		42	Pass/Fail
Applying Surface Finishes to Composite Mouldings	O	130		32	Pass/Fail
Bonding Composite Mouldings	O	95		22	Pass/Fail
Producing Composite Assemblies	O	151		42	Pass/Fail
Optical Engineering - Must complete the following unit:					
Carrying Out Inspection Activities on Optical Components	O	151		42	Pass/Fail
Plus one more unit from the following:					
Operating Infra-Red/Special Material Lens Process Machines	O	151		42	Pass/Fail
Operating Optical Glass Lens Process Machines	O	151		42	Pass/Fail
Operating Optical Prism and Flat Process Machines	O	151		42	Pass/Fail
Operating CNC Aspheric Optical and Diamond Turning Machines	O	130		32	Pass/Fail

Operating CNC Optical Grinding and Polishing Machines	O	130		32	Pass/Fail
Operating Optical Cylinder and Dome Process Machines	O	151		42	Pass/Fail
Operating Vacuum Coating Optical Process Machines	O	130		32	Pass/Fail
Operating Optical Plastic Process Machines	O	151		42	Pass/Fail