



ETCAL Level 1 NVQ Certificate in Performing Engineering Operations  
601/1793/X  
Overview

## Qualification aim

This qualification has been designed to cover those learners who are either: acquiring engineering competencies in a realistic, sheltered and controlled environment, or employed but require additional engineering competencies as part of an existing job role or to enable career progression.

## Qualification introduction

Mandatory units cover those areas which have a common approach such as organisational safety requirements, team working and using technical information There is 1 optional pathway offering a choice of units applicable to individual workplaces and working environments

## 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.

<b>Qualification Number</b>		601/1793/X
<b>Title</b>		NVQ Certificate in Performing Engineering Operations
<b>Unit Level</b>		Level 1
<b>Guided Learning Hours</b>		160
<b>Total Qualification Time</b>		200
<b>Unit Credit Value</b>		22
<b>Unit Grading Structure</b>		Pass

\*denotes mandatory unit

<b>Unit Title</b>	<b>GLH</b>	<b>Credits</b>
Working Safely in an Engineering Environment *	33	5
Carrying Out Engineering Activities Efficiently and Effectively *	22	3
Using and Communicating Technical Information *	22	3
5 Making Components using Hand Tools and Fitting Techniques	63	10
Assembling Mechanical Components	63	10
Carrying Out Pipe Fitting Activities	63	10
Using Lathes for Turning Operations	63	10
Using Milling Machines	63	10
Using Grinding Machines	63	10
Carrying Out Routine Servicing of Mechanical Equipment	63	10
Assembling Fluid Power Equipment	63	10
Carrying Out Sheet Metal Cutting, Forming and Assembly Activities	63	10
Cutting and Shaping Platework Components	63	10

Using Oxy-Fuel Gas Cutting Equipment	63	10
Using Manual Metal Arc Welding Equipment	63	10
Using Manual TIG Welding Equipment	63	10
Using Manual MIG or MAG Welding Equipment	63	10
Using Manual Oxy-Fuel Gas Welding Equipment	63	10
Using Manual Flame Brazing and Soldering Equipment	63	9
Wiring Electrical Equipment and Circuits	63	10
Assembling Electrical Wiring Support Systems	63	10
Assembling and Wiring Electrical Panels	63	10
Assembling Electronic Circuits	63	10
Carrying Out Routine Servicing on Electrical/Electronic Equipment	63	10
Making Components from Wood-Based Materials	63	10
Assembling Engineering Woodwork Components	59	9
Carrying Out Composite Moulding Activities	63	10
Assembling Composite Components	59	9
Preparing Sand for Moulding and Coremaking	38	5
Making Sand Moulds and Cores for Casting	63	10
Manually Casting Components	59	9
Fettling Cast Components	45	6
Applying Coatings or Coverings to Finish Surfaces	49	7
Applying Surface Treatments	49	7
Applying Heat Treatment to Engineering Materials	49	7

Hand Forging Engineering Materials	49	7
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**Learners must achieve a minimum of 22 credits to gain the qualification. 11 credits must be achieved by completing the 3 mandatory units and the remaining credits achieved by completing 2 units for the optional pathway with a minimum of 11 credits. Mandatory Units – all units must be completed**