



## Course Objectives

- To assist participants achieve basic engineering skills and/or build on skills they already have
- To assist participants gain a nationally recognised qualification
- To improve the skills level of an Employer's Workforce

## Course Content

After induction to the programme candidates will be required to provide evidence of competence, plus an understanding of underpinning knowledge for the following NVQ units

### Mandatory Units - all 3 must be completed

- FWE2/001 Complying with Statutory Regulations and Organisational Safety requirements
- FWE2/002 Using and Interpreting Engineering Data and Documentation
- FWE2/003 Working Efficiently and Effectively in Engineering

There are Six Pathways that the employer must select ONE route from either FWA, FWB, FWC, FWD, FWG or FWK;

### Pathway FWA: Manual Welding

One assessment route from the choice below:

- FWE2/004 Joining Materials by the Manual Metal Arc Welding Process
- FWE2/005 Joining Materials by Manual MIG/MAG and other Continuous Wire Welding processes
- FWE2/006 Joining materials by Manual TIG and Plasma-arc Welding Processes
- FWE2/007 Joining Materials by the Manual Gas Welding Process
- FWE2/008 Producing Fillet Welded Joints using a Manual Welding Process

### Pathway FWB: Welding Machine Operating

One assessment route from the choice below:

- FWE2/009 Welding Materials with Mechanised Arc Welding Equipment
- FWE2/010 Welding Materials using Resistance Spot, Seam and Projection Welding Machines
- FWE2/011 Welding Materials using Laser Welding Machines
- FWE2/012 Welding Materials using Electron Beam Welding Machines
- FWE2/013 Welding Materials using Friction Welding Machines

### Pathway FWC: Rail Welding

One assessment route from the choice below:

- FWE2/014 Joining Rails using the Aluminothermic Welding Process
- FWE2/015 Restore Rails to Operational Condition using an Arc Welding Process FWE2/016 Welding Rails using Flash Welding Equipment

## NVQ 2 FABRICATION AND WELDING



### Pathway FWD: Brazing and/or Soldering

One assessment route from the choice below:

- FWE2/017 Joining Materials by Manual Torch Brazing and Soldering
- FWE2/018 Joining Materials by Manual Torch Brazing Machines

### Pathway FWG: Plateworker (3mm upwards)

All three mandatory assessment routes plus the assessment route in Group A, plus one assessment route from Group B, plus one assessment route from Group C, plus one assessment route from Group D:

#### Group A

- FWE2/021 Marking Out Components for Fabrication M/102/3946

#### Group B

- FWE2/026 Cutting and Shaping Materials using NC/CNC Laser Profiling Machines
- FWE2/027 Cutting and Shaping using NC/CNC Plasma or Gas Cutting Machines
- FWE2/032 Cutting Plate and Sections using Shearing Machines
- FWE2/033 Cutting Materials using Hand Operated Thermal Cutting Equipment
- FWE2/034 Cutting and Shaping Materials using Gas Cutting Machines
- FWE2/035 Cutting Materials using Saws and Abrasive Discs

#### Group C

- FWE2/008 Producing Fillet Welded Joints using a Manual Welding Process
- FWE2/009 Welding Materials with Mechanised Arc Welding Equipment
- FWE2/028 Assembling Components using Mechanical Fasteners
- FWE2/031 Slinging, Lifting and Moving Materials and Components

#### Group D

- FWE2/036 Bending and Forming Plate using Power Operated Machines
- FWE2/037 Forming Platework using Power Rolling Machines
- FWE2/038 Producing Platework Assemblies
- FWE2/039 Producing Holes using Drilling Machines

### Pathway FWK: Thermal Cutting

Two assessment routes from the choice below:

- FWE2/026 Cutting and Shaping Materials using NC/CNC Laser Profiling Machines
- FWE2/027 Cutting and Shaping using NC/CNC Plasma or Gas Cutting Machines
- FWE2/033 Cutting Materials using Hand Operated Thermal Cutting Equipment
- FWE2/034 Cutting and Shaping Materials using Gas Cutting Machines

### Designed for

Shop floor workers with minimum skills or young persons with no skills to enable candidates to gain Basic Engineering Skills

### Location:

Employers premises

### Duration:

6 to 9 months depending on candidate