

4.0 Qualification specific information

Pathway 1 - Pipe and Tube Fabrication SFWEA

Learner's must complete the three Mandatory assessment routes below plus five assessment routes from the Optional Section (Optional Section: one assessment route must be chosen from Group A, one from Group B, two from Group C, and one from Group D: a total of eight units)

Mandatory: All three mandatory assessment routes must be completed

EAL code	Assessment route title	Level	Credit Value
SFWE3/001A	Complying with statutory regulations and organisational safety requirements	5	5
SFWE3/002A	Using and interpreting engineering data and documentation	5	5
SFWE3/003A	Working efficiently and effectively in engineering	5	5

Group A

One optional assessment route must be completed

EAL code	Assessment route title	Level	Credit Value
SFWE3/022A	Marking out components for metalwork	6	47
SFWE3/027A	Developing and marking out templates for metalwork	6	49

Group B

One optional assessment route must be completed

EAL code	Assessment route title	Level	Credit Value
SFWE3/033A	Cutting and shaping materials using portable thermal cutting equipment	6	35
SFWE3/034A	Cutting materials using saws and abrasive discs	6	32

Group C

Two optional assessment routes must be completed

EAL code	Assessment route title	Level	Credit Value
SFWE3/044A	Forming pipework by machine bending	6	40
SFWE3/045A	Producing pipe fabrications	6	40
SFWE3/037A	Producing and finishing holes using drilling machines	6	36

Group D**One optional assessment route must be completed**

EAL code	Assessment route title	Level	Credit Value
SFWE3/028A	Joining fabricated components using mechanical fasteners	6	36
SFWE3/046A	Producing socket and flange fillet welded joints in pipe using a manual welding Process	6	49
SFWE3/029A	Bonding engineering materials using adhesives	6	38
SFWE3/039A	Slinging, lifting and moving materials and components	6	29

Pathway 2 - Manual Welding SFWEB

Learner's must complete the three Mandatory assessment routes below plus one further optional assessment routes (four units in total)

Mandatory: All three mandatory assessment routes must be completed

EAL code	Assessment route title	Level	Credit Value
SFWE3/001A	Complying with statutory regulations and organisational safety requirements	5	5
SFWE3/002A	Using and interpreting engineering data and documentation	5	5
SFWE3/003A	Working efficiently and effectively in engineering	5	5

One optional assessment route must be completed

EAL code	Assessment route title	Level	Credit Value
SFWE3/004A	Welding materials by the manual metal arc process	6	57
SFWE3/005A	Welding materials by the semi-automatic MIG/MAG and flux cored arc processes	6	57
SFWE3/006A	Welding materials by the manual TIG and plasma arc welding process	6	57
SFWE3/007A	Welding materials by the manual oxy/fuel gas welding process	6	57
SFWE3/008A	Welding pipe/tube using multiple manual arc welding processes	6	64
SFWE3/009A	Welding plate using multiple manual arc welding processes	6	64

Pathway 3 - Welding Machine Setting and Operating SFWEC

Learner's must complete the three Mandatory assessment routes above plus two further optional assessment routes - one from Group A and one from Group B (five units in total)

Mandatory: All three mandatory assessment routes must be completed

EAL code	Assessment route title	Level	Credit Value
SFWE3/001A	Complying with statutory regulations and organisational safety requirements	5	5
SFWE3/002A	Using and interpreting engineering data and documentation	5	5
SFWE3/003A	Working efficiently and effectively in engineering	5	5

Group A

One optional assessment route must be completed

EAL code	Assessment route title	Level	Credit Value
SFWE3/010A	Preparing mechanised arc welding equipment for production	6	48
SFWE3/011A	Preparing resistance spot, seam and projection welding machines for production	6	48

Group B

One optional assessment route must be completed

EAL code	Assessment route title	Level	Credit Value
SFWE3/016A	Welding materials with mechanised arc welding equipment	6	40
SFWE3/017A	Welding materials using resistance spot, seam and projection welding machines	6	40

Pathway 4 - Plateworking (3mm upwards) SFWED

Learner's must complete the three Mandatory assessment routes above plus six optional assessment routes (one assessment route must be chosen from Group A, one from Group B, two from Group C and two from Group D: nine units in total)

Mandatory: All three mandatory assessment routes must be completed

EAL code	Assessment route title	Level	Credit Value
SFWE3/001A	Complying with statutory regulations and organisational safety requirements	5	5
SFWE3/002A	Using and interpreting engineering data and documentation	5	5
SFWE3/003A	Working efficiently and effectively in engineering	5	5

Group A

One optional assessment route must be completed

EAL code	Assessment route title	Level	Credit Value
SFWE3/022A	Marking out components for metalwork	6	47
SFWE3/027A	Developing and marking out templates for metalwork	6	49

Group B

One optional assessment route must be completed

EAL code	Assessment route title	Level	Credit Value
SFWE3/032A	Cutting plate and sections using shearing machines	6	30
SFWE3/033A	Cutting and shaping materials using portable thermal cutting equipment	6	35
SFWE3/034A	Cutting Materials using Saws and Abrasive Discs	6	32
SFWE3/066A	Operating CNC Fabrication Equipment	6	44

Group C

Two optional assessment routes must be completed

EAL code	Assessment route title	Level	Credit Value
SFWE3/035A	Bending and forming plate using press brakes or bending machines	6	36
SFWE3/036A	Forming platework using power rolling machines	6	36
SFWE3/037A	Producing and finishing holes using drilling machines	6	36
SFWE3/038A	Producing platework assemblies	6	40

Group D**Two optional assessment routes must be completed**

EAL code	Assessment route title	Level	Credit Value
SFWE3/028A	Joining fabricated components using mechanical fasteners	6	36
SFWE3/031A	Producing fillet welded joints using a manual welding process	6	50
SFWE3/039A	Slinging, lifting and moving materials and components	6	29

Pathway 5 - Sheet Metalworking 3 mm or less SFWEE

Learner's must complete the three Mandatory assessment routes above plus a further three mandatory assessment routes from Group A, plus three optional assessment routes must be selected: two from Group B, and one from Option Group C: nine units in total)

Mandatory: All three mandatory assessment routes must be completed

EAL code	Assessment route title	Level	Credit Value
SFWE3/001A	Complying with statutory regulations and organisational safety requirements	5	5
SFWE3/002A	Using and interpreting engineering data and documentation	5	5
SFWE3/003A	Working efficiently and effectively in engineering	5	5

Group A

The following three mandatory assessment routes must be completed

EAL code	Assessment route title	Level	Credit Value
SFWE3/022A	Marking out components for metalwork	6	47
SFWE3/023A	Cutting sheetmetal to shape using hand and machine tools	6	49
SFWE3/024A	Forming sheetmetal using hand and machine tools	6	50

Group B

Two optional assessment routes must be completed

EAL code	Assessment route title	Level	Credit Value
SFWE3/025A	Producing sheetmetal assemblies	6	47
SFWE3/026A	Heat treating materials for fabrication activities	6	38
SFWE3/027A	Developing and marking out templates for metalwork	6	49

Group C**One optional assessment route must be completed**

EAL code	Assessment route title	Level	Credit Value
SFWE3/028A	Joining fabricated components using mechanical fasteners	6	36
SFWE3/029A	Bonding engineering materials using adhesives	6	38
SFWE3/030A	Joining materials by resistance spot welding	6	38
SFWE3/031A	Producing fillet welded joints using a manual welding process	6	50
SFWE3/039A	Slinging, lifting and moving materials and components	6	29
SFWE3/066A	Operating CNC fabrication equipment	6	44

Pathway 6 - Structural Steelwork SFWEF

Learner's must complete the three Mandatory assessment routes above plus six optional assessment routes must be selected (one assessment route must be chosen from Group A, one from Group B, two from Option Group C, and two from Option Group D: nine units in total)

Mandatory: All three mandatory assessment routes must be completed

EAL code	Assessment route title	Level	Credit Value
SFWE3/001A	Complying with statutory regulations and organisational safety requirements	5	5
SFWE3/002A	Using and interpreting engineering data and documentation	5	5
SFWE3/003A	Working efficiently and effectively in engineering	5	5

Group A

One optional assessment route must be completed

EAL code	Assessment route title	Level	Credit Value
SFWE3/022A	Marking out components for metalwork	6	47
SFWE3/027A	Developing and marking out templates for metalwork	6	49

Group B

One optional assessment route must be completed

EAL code	Assessment route title	Level	Credit Value
SFWE3/032A	Cutting plate and sections using shearing machines	6	30
SFWE3/033A	Cutting and shaping materials using portable thermal cutting equipment	6	35
SFWE3/034A	Cutting materials using saws and abrasive discs	6	32
SFWE3/066A	Operating CNC fabrication equipment	6	44

Group C

Two optional assessment routes must be completed

EAL code	Assessment route title	Level	Credit Value
SFWE3/041A	Producing structural steel ancillary components	6	40
SFWE3/042A	Producing major structural components/sub-assemblies	6	42
SFWE3/037A	Producing and finishing holes using drilling machines	6	36

Group D**Two optional assessment routes must be completed**

EAL code	Assessment route title	Level	Credit Value
SFWE3/028A	Joining fabricated components using mechanical fasteners	6	36
SFWE3/031A	Producing fillet welded joints using a manual welding process	6	50
SFWE3/039A	Slinging, lifting and moving materials and components	6	29
SFWE3/043A	Erecting structural steelwork	6	42