

## **Course Outline:**

### **National Certificate in Engineering Fabrication (Light OR Heavy): NQF Level 3**

**Course Code: C.C.008**

#### **Admission Requirements**

NQF Level 2 Engineering Fabrication

#### **Course Content**

<b>ID</b>	<b>UNIT STANDARD TITLE</b>	<b>LEVEL</b>	<b>CREDITS</b>
116520	Apply safety, health and environmental principles and procedures in a workplace	Level 2	2
243075	Draw and interpret simple plate, pipe and structural steel plate, pipe and structural steel drawings	Level 2	6
14713	Use welding definitions and symbols	Level 2	5
13234	Apply quality procedures	Level 3	8
243077	Cut material using the oxy-fuel pipe cutting device	Level 3	3
243080	Cut material using the oxy-fuel profile cutting machine	Level 3	5
243081	Cut material using the oxy-fuel straight-line cutting machine	Level 3	3
115568	Fabricate components by means of the parallel line method	Level 3	4
115571	Fabricate components by means of the radial line method	Level 3	4
115565	Fabricate components by means of the triangulation method	Level 3	4
12244	Form and shape sheet, plate, pipe and structural section using power machinery	Level 3	15
244339	Mark off and fabricate sections using the contour marker method	Level 3	9
12245	Mechanically cut, drill, punch and assemble fabrication materials using powered machinery	Level 3	8
119472	Accommodate audience and context needs in oral/signed communication	Level 3	5
9528	Communicate with clients	Level 3	3
12488	Complete feasibility and commissioning reports	Level 3	3
9010	Demonstrate an understanding of the use of different number bases and measurement units and an awareness of error in the context of relevant calculations	Level 3	2
9013	Describe, apply, analyse and calculate shape and motion in 2- and 3-dimensional space in different contexts	Level 3	4
119457	Interpret and use information from texts	Level 3	5
9012	Investigate life and work related problems using data and probabilities	Level 3	5

7456	Use mathematics to investigate and monitor the financial aspects of personal, business and national issues	Level 3	5
119465	Write/present/sign texts for a range of communicative contexts	Level 3	5
243061	Assemble work pieces in jigs (minor amendments include the use of manipulators)	Level 2	3
243069	Braze metals using the oxy-fuel brazing process	Level 2	6
10780	Cut mild steel by means of an Oxy-acetylene profile cutter	Level 2	4
244077	Demonstrate understanding of chemicals in a processing cutter	Level 2	6
10842	Join cast iron by means of arc welding	Level 2	3
12482	Join metals using the resistance welding process	Level 2	4
12481	Sling loads	Level 2	4
243076	Weld carbon steel workpieces using the cored-wire welding process in the down-hand position	Level 2	8
243066	Weld carbon steel workpieces using the gas metal arc welding process in the down-hand position	Level 2	8
243056	Weld carbon steel workpieces using the shielded metal arc welding process in all positions	Level 2	16
244343	Align a steel structure using a dumpy level	Level 3	2
12246	Assemble and mechanically join sheet, plate, tube, pipe and steel sections	Level 3	4
12457	Develop learning strategies and techniques	Level 3	3
12456	Explain and use organisational procedures	Level 3	6
115740	Fabricate a launder	Level 3	5
115744	Fabricate a spiral by means of triangulation	Level 3	5
10783	Join of aluminium by means of arc welding	Level 3	5
115699	Fabricate rolled sections	Level 3	6
14700	Lay out and mark off regular and irregular shapes for thermoplastic fabrication	Level 3	25
244346	Layout and fabricate a metal structure	Level 3	5
9526	Manage basic business finance	Level 3	6
9530	Manage work time effectively	Level 3	3
8039	Operating cranes	Level 3	10
8038	Operating lift trucks	Level 3	6
14695	Remove material with the shields metal arc gouging process	Level 3	8
10790	Silver solder metals by means of Oxy-acetylene equipment	Level 3	3
243068	Weld carbon steel workpieces using the gas tungsten arc welding process in the down-hand position	Level 3	15
10789	Weld mild steel by means of Oxy-acetylene equipment	Level 3	4
14698	Cut materials using plasma cutting	Level 4	4

243065	Weld carbon steel pipe using the gas metal arc welding process in all positions	Level 4	20
243062	Weld carbon steel pipe, using the shielded metal arc welding process in all positions	Level 4	20