

Course Information

National Certificate: Welding Application and Practice (Learning Programme ID 58535)

National Certificate: Welding Application and Practice				
SAQA ID	57886			
Level	3			
Credits	151			
Duration	1 year			

The purpose of this Qualification is to provide learners with the standards and the range of learning required to work effectively in the welding industry and to meet the challenges of such an environment.

This Qualification recognises the basic skills, knowledge and values acquired by learners involved in welding. The purpose of this Qualification is to develop learners who, after completion, demonstrate the ability to:

Use and apply mechanical and welding technology, techniques, processes and skills, as applied in the fabrication and welding industry, using appropriate tools and measuring equipment. Use and apply a variety of fillet welding, oxyfuel cutting and oxy-fuel joining processes. Demonstrate knowledge of the welding industry and its productivity requirements, by applying appropriate work-procedures. Communicate effectively in order to achieve personal, business and organizational objectives. (Range: Reading and interpreting work instructions, documents and drawings; maintaining effective relationships; exploring options for further learning).

Course Expectation

This is a learnership, and therefore has a theory and workplace component.

- Learners are expected to complete the theory at the training provider.
- The workplace component must be complete at a recognised workplace.
- The activities at the workplace will be determined by the workplace tasks that need to be completed.

Training Provider

Workplace

Selection of Workplace

Learners are required to ensure that they have secured a workplace. Whilst IQ supports learners in this endeavour, it is the learners responsibility.

The workplace selected must be in line with the course undertaken. Learners will be provided with a pack that includes:

- Letter of request for placement
- · Placement guidelines for Employer organisations



Your course comprises of the following:

- Complete Learner orientation on the programme expectations.
- · Mentor guidelines for the workplace mentors.
- · Work integrated guidelines for the workplace.
- · Learner orientation guide.
- Process meetings map with employers and mentors.
- Training plan including the schedule of assessments
- Process map for the qualification.
- · Learner guides, workbooks and log books
- E-learning lessons/ PC Tablet (with audio voice lessons)
- Training videos to support lessons showing practical applications

Assessment

Assessments are an important part of your learning as it serves as a measure to identify if you have achieved the competencies required in this course.

Various assessment methods are used during the course of your programme. All these are collated into a Portfolio of Evidence which is used for the final summative assessment. Each module of your study will have an assessment of some form. The workplace is assessed through a logbook. This comprises a list of tasks which needs to be completed and signed off by your workplace mentor.

Delivery Modality

The delivery modality is flexible and designed according to the needs of the client.

The following are some of the options:

Option 1

- Lessons are presented on a PC Tablet. These are recorded.
- All the learner guides and workbooks are on the PC Tablet.

Option 2

 E-learning. Lessons are on the e-learning platform and learners progress through them.

Option 3

Face to face tuition according to a training plan.



Programme Modules

ID	UNIT STANDARD TITLE	NOF LEVEL	CREDITS
	Prepare and secure work pieces for welding (includes the use	•	8
243056	Weld carbon steel workpieces using the shielded metal arc	NQF Level 02	16
<u>243064</u>	Weld carbon steel workpieces, using the gas metal arc welding process in all positions	NQF Level 02	15
<u>14707</u>	Gouge material with air-carbon-arc gouging process	NQF Level 03	10
243052	Weld carbon steel workpieces using the cored-wire welding process in all positions	NQF Level 03	8
243058	Weld carbon steel workpieces using the gas tungsten arc welding process in all positions	NQF Level 03	25
243053	Weld carbon steel workpieces using the oxy-acetylene gas welding process in all positions	NQF Level 03	10
116937	Use a Graphical User Interface (GUI)-based spreadsheet application to create and edit spreadsheets	NQF Level 02	4
119472	Accommodate audience and context needs in oral/signed communication	NQF Level 03	5
<u>9528</u>	Communicate with clients	NQF Level 03	3
<u>12488</u>	Complete feasibility and commissioning reports	NQF Level 03	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	NQF Level 03	2
119457	Interpret and use information from texts	NQF Level 03	5
9012	Investigate life and work related problems using data and probabilities	NQF Level 03	5
<u>7456</u>	Use mathematics to investigate and monitor the financial aspects of personal, business and national issues	NQF Level 03	5
<u>119465</u>	Write/present/sign texts for a range of communicative contexts	NQF Level 03	5
<u>243061</u>	Assemble work pieces in jigs (minor amendments include the use of manipulators)	NQF Level 02	3
	243064 14707 243052 243058 243053 116937 119472 9528 12488 9010 119457 9012 7456 119465	243055 Prepare and secure work pieces for welding (includes the use of manipulators) 243056 Weld carbon steel workpieces using the shielded metal arc welding process in all positions 243064 Weld carbon steel workpieces, using the gas metal arc welding process in all positions 14707 Gouge material with air-carbon-arc gouging process 243052 Weld carbon steel workpieces using the cored-wire welding process in all positions 243058 Weld carbon steel workpieces using the gas tungsten arc welding process in all positions 243053 Weld carbon steel workpieces using the oxy-acetylene gas welding process in all positions 116937 Use a Graphical User Interface (GUI)-based spreadsheet application to create and edit spreadsheets 119472 Accommodate audience and context needs in oral/signed communication 9528 Communicate with clients 12488 Complete feasibility and commissioning reports Demonstrate an understanding of the use of different number bases and measurement units and an awareness of error in the context of relevant calculations 119457 Interpret and use information from texts 119457 Interpret and use information from texts 119456 Use mathematics to investigate and monitor the financial aspects of personal, business and national issues Write/present/sign texts for a range of communicative contexts Assemble work pieces in jigs (minor amendments include the	243055 Prepare and secure work pieces for welding (includes the use of manipulators) Weld carbon steel workpieces using the shielded metal arc welding process in all positions Weld carbon steel workpieces, using the gas metal arc welding process in all positions NQF Level 02 Weld carbon steel workpieces, using the gas metal arc welding process in all positions Weld carbon steel workpieces using the cored-wire welding process in all positions Weld carbon steel workpieces using the gas tungsten arc welding process in all positions Weld carbon steel workpieces using the gas tungsten arc welding process in all positions Weld carbon steel workpieces using the oxy-acetylene gas welding process in all positions Weld carbon steel workpieces using the oxy-acetylene gas welding process in all positions Use a Graphical User Interface (GUI)-based spreadsheet application to create and edit spreadsheets Accommodate audience and context needs in oral/signed communication NQF Level 03 NQF Level 03 NQF Level 03 Pomonstrate an understanding of the use of different number bases and measurement units and an awareness of error in the context of relevant calculations Investigate life and work related problems using data and probabilities Use mathematics to investigate and monitor the financial aspects of personal, business and national issues Write/present/sign texts for a range of communicative contexts Assemble work pieces in jigs (minor amendments include the

Elective	<u>12238</u>	Draw and interpret simple engineering drawings	NQF Level 02	10
Elective	<u>12484</u>	Perform basic fire fighting	NQF Level 02	4
Elective	<u>12483</u>	Perform basic first aid	NQF Level 02	4
Elective	<mark>243074</mark>	Weld carbon steel components, using the submerged arc welding process in a downhand position	NQF Level 02	12
Elective	<u>243077</u>	Cut material using the oxy-fuel pipe cutting device	NQF Level 03	3
Elective	<u>243080</u>	Cut material using the oxy-fuel profile cutting machine	NQF Level 03	5
Elective	<u>243081</u>	Cut material using the oxy-fuel straight-line cutting machine	NQF Level 03	3
Elective	<u>12457</u>	Develop learning strategies and techniques	NQF Level 03	3
Elective	<u>243086</u>	Draw and interpret complex plate, pipe and structural steel plate, pipe and structural steel drawings	NQF Level 03	6
Elective	<u>260757</u>	Operate a straddle carrier	NQF Level 03	10
Elective	<u>8039</u>	Operating cranes	NQF Level 03	10
Elective	<u>8038</u>	Operating lift trucks	NQF Level 03	6
Elective	<u>243078</u>	Perform destructive testing on welded specimens	NQF Level 03	5
Elective	<u>14695</u>	Remove material with the shields metal arc gouging process	NQF Level 03	8
Elective	<u>243088</u>	Weld carbon steel pipe, with combination welding processes using the gas tungsten arc welding and gas metal arc welding, in all positions	NQF Level 04	8
Elective	<u>243059</u>	Weld workpieces in the stainless steel material group, using the gas metal arc welding process in all positions	NQF Level 04	10
Elective	<u>243089</u>	Weld workpieces within the aluminium material group, using the gas metal arc welding process in all positions	NQF Level 04	10
Elective	<u>243079</u>	Weld workpieces within the aluminium material group, using the gas tungsten arc welding process in all positions.	NQF Level 04	10
Elective	<u>243057</u>	Weld workpieces within the stainless steel material group, using the gas tungsten arc welding process in all positions	NQF Level 04	10

Z