



Accredited Provider
The Skills College for Development and Training (Pty)Ltd.

Occupational Certificate: Welder

Qualification ID 94100 – NQF 4: 373 Credits

INTRODUCTION

Purpose:

The purpose of this qualification is to prepare a learner to:

Join metal products in accordance with Welding Procedure Specifications using an electric arc or gas welding process.

A qualified learner will be able to:

Perform cutting, gouging and gas welding of ferrous materials using oxy fuel, carbon arc and plasma cutting equipment.

Produce fillet welds using various welding processes.

Produce plate welds using various welding processes.

Produce pipe welds using various welding processes.

RATIONALE

This qualification is a listed trade qualification and falls within the Occupational Qualifications Framework of the NQF of South Africa. Of specific importance is the fact that this qualification elevates training of Welders in South Africa to accepted international standards.

A wide range of industries in the South African economy employs welders, qualified as artisans .Inclusive are companies in the manufacturing sector, mining, petro-chemical as well as engineering contractors in large and small projects - including projects that are key to the economic development of South Africa such as power supply.

This qualification addresses one of the key trades in which labour market shortages for skilled artisans are experienced. Reports of large number of welders contracted from other countries to address the scarcity of welding skills are common.

The availability of this Welding qualification for training of trades' persons to accepted international standards is regarded as an important resource to support of national artisan development initiatives in South Africa.

The qualification ensures that a sound skills base is developed at artisan level that can serve as the foundation for achieving coded welding status required for the execution of specialized welds by industry.

The importance of providing opportunities for persons that are unemployed, who seeks to develop skills that allows them to enter into small welding business opportunities in rural and developed areas of the country is supported by the design of the qualification. Specific skill sets in basic welding practices are inclusive and allows for the training of such persons within the overall structure of the trade. Recognition achieved for completion of these skills sets, when delivered by accredited providers, allows the learners to build their portfolio and towards completion of the full trade.

TIME PERIOD

The training will be provided over a period of 3 years

ADMISSION REQUIREMENTS

Grade 9 plus a Metal Work and Welding special skills based education program is accepted as an equivalent to the entry requirements.

QUALIFICATION

UNIT STANDARDS:

Number	Title	NQF LEVEL	CREDITS
651202000-KM-01	Introduction to the welding trade,	Level 2	2
651202000-KM-02	Occupational Safety, Health and Environmental Protection	Level 2	4
651202000-KM-03	Welding schematics, calculations, welds and welded joints,	Level 2	6
651202000-KM-04	Weld imperfections	Level 2	2
651202000-KM-05	Cutting and gouging	Level 2	2
651202000-KM-06	Welding consumable classification and handling	Level 2	4
651202000-KM-07	Metals and weldability of metals	Level 3	8
651202000-KM-08	Fusion welding	Level 3	6
651202000-KM-09	Arc welding	Level 3	8
651202000-KM-10	Gas welding and cutting	Level 3	4
651202000-KM-11	Welding codes, standards and parameters	Level 4	6
651202000-KM-12	Shrinkage, residual stress and distortion,	Level 4	4
651202000-KM-13	Manual Metal Arc (MMA) welding process	Level 4	7
651202000-KM-14	The Metal Inert Gas/Metal Active Gas/Flux Cored Arc	Level 7	7

	(MIG/MAG/FCAW) welding process		
651202000-KM-15	Manual Metal Arc (MMA) welding process	Level 4	7
651202000-KM-16	Welding inspection and quality	Level 4	4
651202000-PM-01	Fabricate simple components or work pieces	Level 2	4
651202000-PM-02	Cut, gouge and gas weld material manually	Level 2	12
651202000-PM-03	Perform fillet welds using the Shielded Metal Arc Welding process	Level 3	12
651202000-PM-04	Perform fillet welds using the Gas Metal Arc Welding process	Level 3	12
651202000-PM-05	Perform fillet welds using the Gas Tungsten Arc Welding process	Level 3	16
651202-PM-06	Perform plate butt welds using the Shielded Metal Arc Welding process	Level 4	16
651202000-PM-07	Perform plate butt welds using the Gas Metal Arc Welding process	Level 4	16
651202000-PM-08	Perform plate butt welds using the Gas Tungsten Arc Welding process	Level 4	16
651202000-PM-09	Perform pipe welds using the Shielded Metal Arc Welding process	Level 4	16
651202000-PM-10	Perform pipe welds using the Gas Metal Arc Welding process	Level 4	16
651202000-PM-11	Perform pipe welds using the Gas Tungsten Arc Welding process	Level 4	20
651202000-WM-01	Cut and gouge a range of materials in the workplace	Level 2	8
651202000-WM-02	Produce a range of fillet welds using various welding processes in a workplace	Level 4	40
651202000-WM-03	Care for, control and handle consumables and materials in a workshop	Level 2	4
651202000-WM-04	Produce a range of plate welds using various welding processes in a workplace	Level 4	40
651202000-WM-05	Team work, communication and reporting in the workplace	Level 3	8
651202-WM-06	Produce a range of pipe welds using various welding processes in a workplace	Level 4	52