



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

## **National Certificate: Construction: Roadworks**

*Qualification ID 24133– NQF 2; 120Credits*

### **INTRODUCTION**

This qualification is for persons who work or intend to work within a construction context on a site, and who seek recognition for essential skills in construction operations in roadworks.

People credited with this qualification must know and are able to:

- Communicate in a Road construction environment (verbally, writing, signs)
- Use mathematics in a Road construction environment (calculate quantities, set out work)
- Perform team leader supervisory functions (when such unit standards are elected)
- Conduct general construction activities (use and maintain small plant)
- Conduct roadworks construction activities (as reflected in unit standard elected)
- Perform supplementary roadworks construction activities

Recipients of this qualification will have the knowledge and skills to conduct the essential operations associated with efficient and safe work in roadworks.

The qualification is designed to be flexible and accessible so that people are able to demonstrate the competencies required to work safely in construction generally and more specifically in roadworks.

### **Rationale for the qualification:**

The introduction of a National Certificate in Construction at level 2, based on unit standards will allow learners to develop skills required in the Construction Industry. The stream or context in which the learner will apply the generic construction competence forms part of the qualification title - in this case - Roadworks - indicating the area of specialization at this level. Some elective unit standards allow learners to develop team leader competence.

Typical job roles would include Roadworker, roadwork team leader.

The qualification will give them the opportunity to balance their practical skills with the essential knowledge needed to earn a formal qualification in construction without formal education becoming an impassable barrier.

There is also a critical need in the industry to identify people who are able to conduct the essential operations associated with efficient and safe construction work in at least one of the construction areas of roadworks, structures or drainage and services.

## **LEARNING ASSUMED TO BE IN PLACE**

It is assumed that learners are competent in:  
Communication and Language at NQF Level 1.  
Mathematical Literacy at NQF Level 1.

### RECOGNISE PREVIOUS LEARNING?

Y

### QUALIFICATION RULES

Credits and rules of combination:

Fundamental:

43 Communications credits from the list specified

16 Mathematics credits from the list specified

Total: 59 Fundamental

Core:

All 38 credits from the list of standards generic to construction

Elective:

A minimum of 23 credits of the candidate's choice from the list of unit standards

Motivation for allocation of credits:

As this qualification leads a person towards being able to communicate in various ways on a construction site, including written communication, candidates are required to obtain forty-three credits in communication - twenty in mother tongue at the level of the qualification and twenty-three in English at level one. As Construction work is practical in nature the balance of credits have been assigned to the practical application of skill and knowledge within the construction industry, and particularly in roadworks. Candidates may select 23 Credits from the list of elective unit standards to total 120 Credits for the qualification.

## **EXIT LEVEL OUTCOMES**

Exit level outcomes:

On completion of this qualification, learners are able to:

Fundamental exit level outcomes:

Show a critical awareness of language usage

Analyse and present information

Communicate appropriately to the purpose and situation

Use mathematics in the construction industry

Apply mathematical methods for different contexts

Apply algebraic notation and terminology appropriately

Read and use maps to enhance communication methods

Analyse cultural products in terms of shape, space and time

Calculate quantities

Core exit level outcomes:

Identify and explain the role of different role players in the industry

Extract information from drawings and calculate quantities

Apply safety in all work processes

Records and maintain records all construction activities on site

Conduct general construction activities

Identify describe and use materials in Civil Engineering Construction

Use and maintain small plant and equipment on a construction site  
 Handle, transport and utilize hazardous materials on a Civil Construction Site  
 Work in confined spaces  
 Implement roadside safety procedures

Elective exit level outcomes:

Apply hot mix asphalt  
 Apply productivity principles on a construction site  
 Batch and mix concrete by volume  
 Conduct a bituminous seal operation  
 Conduct routine site tests to fresh and hardened concrete  
 Control vegetation by use of herbicides  
 Erect directional signs overhead < 10m2  
 Erect anti-dazzle screen  
 Erect fencing  
 Handle, transport, store and utilize hazardous materials on a construction site  
 Implement road side safety  
 Install road markers  
 Install road studs  
 Mix and apply slurry (mixer)  
 Operate a mechanical core drill  
 Operate a moving tractor: boom, rotary slasher  
 Paint road symbols by spray gun  
 Protect banks  
 Read and interpret construction drawings and specifications  
 Repair concrete and segmented concrete road surfaces  
 Replace batter poles/boards, profiles and layer works pegs from given survey data  
 Set out control point for centre line and edge line marking for road marking  
 Use a concrete dumper to haul and dump material  
 Use a sideboom to lift, lower and carry material  
 Use a small self-propelled compactor to compact material  
 Use a tractor to tow various construction implements and attachments systems.

**TIME PERIOD**

This Learnership can be presented over a period of 12 months

**A SELECTION OF THE FOLLOWING UNIT STANDARDS WILL BE COMPLETED IN ORDER TO REACH 120 CREDITS:**

**UNIT STANDARDS:**

	<b>ID</b>	<b>UNIT STANDARD TITLE</b>	<b>PRE-2009 NQF LEVEL</b>	<b>NQF LEVEL</b>	<b>CREDITS</b>
Core	<a href="#">13971</a>	Describe and interpret the composition, roleplayers, processes and role of the construction industry	Level 1	NQF Level 01	3
Core	<a href="#">9966</a>	Establish and prepare a work area	Level 2	NQF Level 02	4
Core	<a href="#">14560</a>	Handle, transport, store and utilize hazardous materials on a civil construction site	Level 2	NQF Level 02	5
Core	<a href="#">13972</a>	Identify describe and use materials in civil engineering construction	Level 2	NQF Level 02	4

Core	<a href="#">14561</a>	Implement roadside safety procedures	Level 2	NQF Level 02	2
Core	<a href="#">14336</a>	Maintain records on a construction site	Level 2	NQF Level 02	2
Core	<a href="#">14054</a>	Read and interpret construction drawings and specifications	Level 2	NQF Level 02	3
Core	<a href="#">9965</a>	Render basic first aid	Level 2	NQF Level 02	3
Core	<a href="#">12875</a>	Use and maintain small plant and equipment on a construction site	Level 2	NQF Level 02	10
Core	<a href="#">15034</a>	Work in confined spaces on construction sites	Level 2	NQF Level 02	2
Fundamental	<a href="#">12462</a>	Engage in a range of speaking and listening interactions for a variety of purposes	Level 1	NQF Level 01	6
Fundamental	<a href="#">12473</a>	Identify and respond to selected literary texts	Level 1	NQF Level 01	5
Fundamental	<a href="#">12469</a>	Read and respond to a range of text types	Level 1	NQF Level 01	6
Fundamental	<a href="#">12470</a>	Write for a variety of different purposes	Level 1	NQF Level 01	6
Fundamental	<a href="#">8963</a>	Access and use information from texts	Level 2	NQF Level 02	5
Fundamental	<a href="#">9009</a>	Apply basic knowledge of statistics and probability to influence the use of data and procedures in order to investigate life related problems	Level 2	NQF Level 02	3
Fundamental	<a href="#">7480</a>	Demonstrate understanding of rational and irrational numbers and number systems	Level 2	NQF Level 02	3
Fundamental	<a href="#">8962</a>	Maintain and adapt oral communication	Level 2	NQF Level 02	5
Fundamental	<a href="#">12444</a>	Measure, estimate and calculate physical quantities and explore, describe and represent geometrical relationships in 2-dimensions in different life or workplace contexts	Level 2	NQF Level 02	3
Fundamental	<a href="#">8967</a>	Use language and communication in occupational learning programmes	Level 2	NQF Level 02	5
Fundamental	<a href="#">7469</a>	Use mathematics to investigate and monitor the financial aspects of personal and community life	Level 2	NQF Level 02	2
Fundamental	<a href="#">9007</a>	Work with a range of patterns and functions and solve problems	Level 2	NQF Level 02	5
Fundamental	<a href="#">8964</a>	Write for a defined context	Level 2	NQF Level 02	5
Elective	<a href="#">12916</a>	Batch and mix concrete by volume	Level 1	NQF Level 01	5

Elective	<a href="#">9357</a>	Develop and use keyboard skills to enter text	Level 1	NQF Level 01	4
Elective	<a href="#">10567</a>	Transport personnel, material and equipment using Light Delivery Vehicle	Level 1	NQF Level 01	4
Elective	<a href="#">9964</a>	Apply health and safety to a work area	Level 2	NQF Level 02	3
Elective	<a href="#">14554</a>	Apply hot mix asphalt	Level 2	NQF Level 02	5
Elective	<a href="#">14556</a>	Apply productivity principles on a construction site	Level 2	NQF Level 02	6
Elective	<a href="#">9986</a>	Apply quality principles on a construction site	Level 2	NQF Level 02	12
Elective	<a href="#">14555</a>	Conduct a bituminous seal operation	Level 2	NQF Level 02	5
Elective	<a href="#">14557</a>	Conduct routine site tests to fresh and hardened concrete	Level 2	NQF Level 02	6
Elective	<a href="#">12918</a>	Control vegetation by use of herbicides	Level 2	NQF Level 02	2
Elective	<a href="#">114219</a>	Demonstrate an understanding and implement environmental initiatives on a construction activity	Level 2	NQF Level 02	4
Elective	<a href="#">12900</a>	Erect and maintain guardrails on a road construction site	Level 2	NQF Level 02	5
Elective	<a href="#">12911</a>	Erect Anti-Dazzle screen	Level 2	NQF Level 02	1
Elective	<a href="#">12899</a>	Install and maintain road furniture	Level 2	NQF Level 02	2
Elective	<a href="#">12909</a>	Install road studs	Level 2	NQF Level 02	2
Elective	<a href="#">13958</a>	Maintain and repair bituminous road surfaces	Level 2	NQF Level 02	8
Elective	<a href="#">119715</a>	Maintain and repair un-surfaced road shoulders	Level 2	NQF Level 02	6
Elective	<a href="#">12913</a>	Mix and apply slurry (By mixer)	Level 2	NQF Level 02	4
Elective	<a href="#">12912</a>	Operate a mechanical core drill	Level 2	NQF Level 02	1
Elective	<a href="#">14563</a>	Operate a moving tractor: boom, rotary slasher	Level 2	NQF Level 02	2
Elective	<a href="#">7547</a>	Operate a personal computer system	Level 2	NQF Level 02	6

Elective	<a href="#">12905</a>	Paint road symbols by spray gun	Level 2	NQF Level 02	1
Elective	<a href="#">12907</a>	Protect banks	Level 2	NQF Level 02	2
Elective	<a href="#">14564</a>	Repair concrete and segmented concrete (block) road surface	Level 2	NQF Level 02	4
Elective	<a href="#">12914</a>	Replace batter poles/boards, profiles and layer works pegs from given survey data	Level 2	NQF Level 02	2
Elective	<a href="#">12908</a>	Set out control point for centre line and edge line marking for road marking	Level 2	NQF Level 02	5
Elective	<a href="#">14565</a>	Use a concrete dumper to haul and dump material	Level 2	NQF Level 02	2
Elective	<a href="#">14566</a>	Use a sideboom to lift, lower and carry material	Level 2	NQF Level 02	5
Elective	<a href="#">14567</a>	Use a small self propelled compactor to compact material	Level 2	NQF Level 02	7
Elective	<a href="#">14568</a>	Use a tractor to tow various construction implements and attachments	Level 2	NQF Level 02	7
Elective	<a href="#">14575</a>	Construct precast kerbs and concrete channels on a roadworks construction site	Level 3	NQF Level 03	5
Elective	<a href="#">14576</a>	Erect directional signs (Range > 10 m2)	Level 3	NQF Level 03	4
Elective	<a href="#">14558</a>	Erect directional signs overhead < 10 m2	Level 3	NQF Level 03	6
Elective	<a href="#">12910</a>	Erect fencing	Level 3	NQF Level 03	2
Elective	<a href="#">14578</a>	Erect palisade fencing	Level 3	NQF Level 03	4
Elective	<a href="#">14562</a>	Install road markers	Level 3	NQF Level 03	2
Elective	<a href="#">14579</a>	Operate mechanical painting machine for remarking	Level 3	NQF Level 03	16
Elective	<a href="#">14581</a>	Repair/replace minor structures	Level 3	NQF Level 03	10