



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

## Further Education and Training Certificate: Plumbing

*Qualification ID 58782– NQF 4; 160Credits*

### INTRODUCTION

purpose:

Qualifying learners will be able to integrate their knowledge, understanding and competencies related to occupational health and safety, National Building Regulations and industry codes of practice to perform a range of plumbing activities.

The achievement of this qualification will contribute to the development of those learners who have not had the benefit of formal education and training in that it provides formal recognition for knowledge and skills acquired through extensive workplace experience. Learners who have achieved this qualification will be able to access further learning opportunities and enhance their prospects for sustainable employment within the construction industry. For new entrants, this Qualification describes the learning outcomes required to participate effectively in a structured work environment. Employers will be able to use this Qualification as the source for identifying skills needs and appropriate training interventions. Providers of education and training will be able to use this Qualification in the design and development of appropriate outcomes based learning materials, assessment guides and related assessment tools. Completion of this qualification relates to the Organising Framework for Occupations (OFO) in that it reflects the competencies of occupational designation 334101 Plumber (General).

Qualifying learners will be able to:

Identify and solve problems with practical mathematical applications.

Communicate in verbal or written form with peers, members of supervisory/management levels and others.

Apply understanding of the functioning of plumbing systems to install, test and maintain them in a built environment.

Apply fault finding techniques to diagnose and repair installed plumbing systems..

### Rationale for the qualification:

As a result of past legacies, many practitioners within the building construction sector were denied career advancement and possible recognition as qualified tradesmen. This was as a direct result of poor educational opportunities at some schools, leading to a lack of entry to formal training institutions. This National Certificate in Plumbing based on unit standards allows learners to reach their full potential of advancement without formal education becoming an impassable barrier and in addition, allow for the recognition of prior learning.

This Qualification represents a planned combination of learning outcomes with a defined purpose in that they consist of the essential embedded knowledge and applied competence required by the plumbing trade of those learners who seek to be recognised by the trade for formal certification and registration as a Plumber.

There is a high demand for learners who are able to apply their skills within the parameters of the legislative framework regulating the plumbing trade and formal recognition at this level is beneficial to learners, the industry and society in the order of sustainable employment, increased productivity levels and the health and safety of communities.

This Qualification is accessible to learners who are employed within the Construction Industry, new entrants into the world of work and persons who are unemployed. There is no gender, ethnic or other bias towards learners who wish to enter this qualification.

Learners who wish to enter this Qualification are assumed to have the equivalent competencies reflected as Learning Assumed to be in Place in the individual unit standards that make up this Qualification. The fundamental competencies in this qualification correspond with those found in other trades at NQF Level 4 to ensure portability of credits between other trade qualifications at this level. This qualification may be achieved through any of the (four) routes, which includes apprenticeship, Learnership, internship, RPL. To successfully complete this qualification, the learner must spend a minimum time in the workplace (competent in sets of skills) linked to notional hours and will be completed in this qualification over a two years.

Wide stakeholder participation in the development of this Qualification has ensured that the learning outcomes are relevant to national and industry skills development needs and learners will be able to transfer their credits from one learning institution and/or employer to another. The development and guidance of learners is facilitated by persons who have achieved the level of qualification recognised by the industry for certification and registration as a Plumber.

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

National Certificate: Plumbing L2 (or equivalent)

Mathematical literacy at NQF Level 3.

Communication at NQF Level 3.

14580: Read and interpret construction drawings and specifications, Level 3.

116534: Carry out basic first aid treatment in the workplace, Level 3.

242692: Install access equipment for construction work, Level 3.

Recognition of Prior Learning:

Pre-assessments in both the Fundamental and Core areas of learning associated with this qualification will be conducted on learners prior to entry into the qualification. Successful demonstration of competence against all criteria contained in unit standards, against which prior learning is measured, will culminate in the award of credits to the learner. Learners' will not be required to repeat learning in those areas where prior learning is recognised and accredited.

The Recognition of Prior Learning process will also be applied where learners', who have achieved this Qualification, wish to continue their further learning and enter other trades at Level 4.

Access to the Qualification:

Access to this qualification is open bearing learning assumed to be in the place.

## EXIT LEVEL OUTCOMES

- . Identify and solve problems with practical mathematical applications.
2. Communicate in verbal or written form with peers, members of supervisory/management levels and other relevant role-players.
3. Apply understanding of the functioning of plumbing systems to install, test and maintain them in a built environment.
4. Apply fault - finding techniques to diagnose and repair installed plumbing systems.

### Critical Cross-Field Outcomes:

This qualification promotes, in particular, the following critical cross-field outcomes:

Identifying and solving problems in which responses display that responsible decisions using critical and creative thinking have been made when:

- > Identifying and developing component shapes for a plumbing activity.
- > Obtaining information where instructions or information on drawings is insufficient.
- > Identifying and pro-actively reporting on non-availability of resources and materials.

Working effectively with others as a member of a team, group, organisation, and community during:

- > Activities involving clients, co-workers and other trades on site.
- > Communicating and receiving advice from supervisor.

Organising and managing oneself and one's activities responsibly and effectively when:

- > Setting out the work area and preparing to fabricate and install components.
- > Performing activities in accordance with industry standards.
- > Selecting plumbing tools and equipment in accordance with the requirements of the task.
- > Ensuring tools, equipment and plumbing materials are securely stored.
- > Maintaining minimum quantities of plumbing materials in accordance with task requirements.
- > Safety equipment and clothing is selected and prepared in accordance with legislative requirements.

Collecting, analysing, organising and critically evaluating information to better understand and explain by:

- > Carrying out written site instructions issued by the client, correctly and efficiently.
- > Correctly interpreting information contained in drawings.
- > Setting out work areas from provided control positions and levels in accordance with instructions and drawings.

Communicating effectively using visual, mathematical and/or language skills in the modes of oral and/or written persuasion when:

- > Issuing clear verbal instructions to team members.
- > Actively listening to feedback received from team members.
- > Evaluating and reporting problem situations to the client.

Using science and technology effectively and critically, showing responsibility towards the environment and health of others when:

- > Applying the appropriate tools and materials for different plumbing activities.

Demonstrating an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation when:

- > Applying the inter-relatedness of the fabrication and installation of components to plumbing 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 160 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="#">242821</a>	Identify responsibilities of a team leader in ensuring that organisational standards are met	Level 4	NQF Level 04	6
Core	<a href="#">244502</a>	Install and maintain soil, waste and vent pipe systems	Level 4	NQF Level 04	12
Core	<a href="#">244492</a>	Install, maintain and repair sanitaryware appliances	Level 4	NQF Level 04	8
Core	<a href="#">244498</a>	Install, maintain and test below ground drainage systems	Level 4	NQF Level 04	14
Core	<a href="#">244507</a>	Install, maintain and test cold water supply systems	Level 4	NQF Level 04	14
Core	<a href="#">244496</a>	Install, maintain and test hot water supply systems	Level 4	NQF Level 04	12
Core	<a href="#">244495</a>	Install, maintain and test Rainwater Systems	Level 4	NQF Level 04	5
Core	<a href="#">13224</a>	Monitor the application of safety, health and environmental protection procedures	Level 4	NQF Level 04	4
Core	<a href="#">244497</a>	Perform building works	Level 4	NQF Level 04	5
Core	<a href="#">244493</a>	Procure resources for construction works	Level 4	NQF Level 04	4
Fundamental	<a href="#">119472</a>	Accommodate audience and context needs in oral/signed communication	Level 3	NQF Level 03	5
Fundamental	<a href="#">119457</a>	Interpret and use information from texts	Level 3	NQF Level 03	5
Fundamental	<a href="#">119467</a>	Use language and communication in occupational learning programmes	Level 3	NQF Level 03	5
Fundamental	<a href="#">119465</a>	Write/present/sign texts for a range of communicative contexts	Level 3	NQF Level 03	5
Fundamental	<a href="#">9015</a>	Apply knowledge of statistics and probability to critically interrogate and effectively communicate findings on life related problems	Level 4	NQF Level 04	6
Fundamental	<a href="#">119462</a>	Engage in sustained oral/signed communication and evaluate spoken/signed texts	Level 4	NQF Level 04	5
Fundamental	<a href="#">119469</a>	Read/view, analyse and respond to a variety of texts	Level 4	NQF Level 04	5
Fundamental	<a href="#">9016</a>	Represent analyse and calculate shape and motion in 2-and 3-dimensional space in different contexts	Level 4	NQF Level 04	4
Fundamental	<a href="#">119471</a>	Use language and communication in occupational learning programmes	Level 4	NQF Level 04	5
Fundamental	<a href="#">7468</a>	Use mathematics to investigate and monitor the financial aspects of personal, business, national and international issues	Level 4	NQF Level 04	6
Fundamental	<a href="#">119459</a>	Write/present/sign for a wide range of contexts	Level 4	NQF Level 04	5
Elective	<a href="#">9973</a>	Apply basic business concepts	Level 3	NQF Level 03	8
Elective	<a href="#">114946</a>	Identify causes of stress and techniques to manage it in the workplace	Level 3	NQF Level 03	2
Elective	<a href="#">244491</a>	Fabricate and install sheet metal components	Level 4	NQF Level 04	8

Elective	<a href="#">244499</a>	Install and maintain solar water heating systems	Level 4	NQF Level 04	10
Elective	<a href="#">244500</a>	Install specialised hospital sanitaryware systems	Level 4	NQF Level 04	8
Elective	<a href="#">114589</a>	Manage time productively	Level 4	NQF Level 04	4
Elective	<a href="#">7997</a>	Managing self-development	Level 4	NQF Level 04	12
Elective	<a href="#">244494</a>	Perform specialised fault-finding and repairs to plumbing systems	Level 4	NQF Level 04	12
Elective	<a href="#">15234</a>	Apply efficient time management to the work of a department/division/section	Level 5	Level TBA: Pre-2009 was L5	4
Elective	<a href="#">15237</a>	Build teams to meet set goals and objectives	Level 5	Level TBA: Pre-2009 was L5	3
Elective	<a href="#">7876</a>	Conduct on-the-Job-Training	Level 5	Level TBA: Pre-2009 was L5	8
Elective	<a href="#">115753</a>	Conduct outcomes-based assessment	Level 5	Level TBA: Pre-2009 was L5	15
Elective	<a href="#">15224</a>	Empower team members through recognising strengths, encouraging participation in decision making and delegating tasks	Level 5	Level TBA: Pre-2009 was L5	4
Elective	<a href="#">11994</a>	Monitor, reflect and improve on own performance	Level 5	Level TBA: Pre-2009 was L5	3