

**QCTO Curriculum - Occupational Certificate: Electrician Code:671101000****Learning objective:**

The purpose of this qualification is to prepare a learner to effectively function as a generic electrical artisan (Electrician) in the domestic, commercial and industrial Low Voltage environment. The learner will be able to perform the following tasks as per the national trade occupation curriculum requirements:

Plan, prepare install, test, connect, commission, maintain, alter, and repair electrical equipment, wiring/control systems and apply the knowledge and skills obtained in a variety of contexts.

**Programme structure:**

The training programme which includes the certificate of compliance for single phase and three phase wiring is intended for permanent employees, apprentices, technicians and Artisan RPL candidates and is aligned to the Electrician Occupational Qualification.

The training programme can be divided into 3 or 4 levels provided all the modules listed below are covered. Each level should incorporate theory, practical and level assessments.

The Training Provider to provide the following:

Provide the accredited trainer to conduct training at a ratio of facilitator/learner 1:12

Provide the printed learner materials including the assessments Provide the consumables as and when needed

Learning environment and learning interventions that are non-discriminative and conducive to learning.

Learners with special needs are considered in the design of learning intervention

Submit monthly reports on learner progress, learner feedback forms and attendance registers.

Provide accommodation and transport the learners to and from the training centre

**Toolboxes**

The suppliers to provide the learners with toolboxes as per the specification attached. See Annexure B

<b>Module Code</b>	<b>Electrician</b>	<b>Days</b>
671101000-KM-01	Health, Safety, Quality and Legislation, NQF Level 4, 5 Credits. <i>KM-01-KT01: Safety, health, environment, risk and quality principles in the workplace</i>	6
671101000-KM-02	<i>Tools, Equipment and Materials, NQF Level 4, 8 Credits.</i> <i>KM-02-KT01: Hand tools and power tools</i> <i>(5%)</i>  <i>KM-02-KT02: Measuring and testing instruments (50%)</i>	10
671101000-KM-03	<i>Electricity and Electronics, NQF Level 4, 13 Credits.</i> <i>KM-03-KT01: Fundamentals of electricity</i> <i>(35%)</i>  <i>KM-03-KT02: Electronics (30%)</i>  <i>KM-03-KT03: Electrical principles of appliances (35%)</i>	16
671101000-KM-04	Industry Context, NQF Level 3, 2 Credits. <i>KM-04-KT01: Introduction to the world of work and the electrical trade (100%)</i>	3

671101000- KM-05	Wireways and Wiring, NQF Level 4, 11 Credits. <i>KM-05-KT01: Wire ways (35%)</i> <i>KM-05-KT02: Wiring of installations (35%)</i> <i>KM-05-KT03: Earthing and bonding (30%)</i>	14
671101000- KM-06	Rotating Electrical Machinery, NQF Level 4, 13 Credits. KM-06-KT01: Rotating electrical machinery - AC motors (35%) KM-06-KT02: Rotating Electrical Machinery - DC motors (35%) KM-06-KT03: Rotating electrical machinery - Alternators and Generators (30%)	16
671101000- KM-07	Electrical Supply Systems and Components, NQF Level 4, 31 Credits. <i>KM-07-KT01: Concepts, theories and principles of supply Systems (20%)</i> <i>KM-07-KT02: Batteries (10%)</i> <i>KM-07-KT03: Transformers (20%)</i> <i>KM-07-KT04: Types of cables and applications (20%)</i> <i>KM-07-KT05: Switchgear and control gear (20%)</i> <i>KM-07-KT06: Lighting systems (10%)</i>	39
671101000- KM-08	Low Voltage Protection, NQF Level 4, 5 Credits. <i>KM-08-KT01: Low voltage protection (100%)</i>	6
671101000- KM -09	Fault Finding, NQF Level 4, 3 Credits. <i>KM-09-KT01: Fault finding (5%)</i>	3
	<b>Total</b>	<b>113</b>
		<b>6 Months</b>
<b>Module Code</b>	<b>Electrician</b>	<b>Days</b>

671101000- PM-01	<p>Use hand and power tools, NQF Level 3, Credits 22.</p> <p><i>PM-01-PS01: Select, use and care of engineering hand tools</i></p> <p><i>PM-01-PS02: Select, use and care for power tools</i></p> <p><i>PM-01-PS03: Select, use and care for electrical measuring instruments</i> <i>PM-01-PS04: Perform soldering activities</i></p> <p><i>PM-01-PS05: Carry out basic electric arc welding in an electrical environment</i> <i>PM-01-PS06: Carry out basic gas cutting in an electrical environment</i></p>	28
671101000- PM-02	<p>Plan worksite set up for installing, wiring and connecting electrical equipment and control systems, NQF Level 3, Credits 5.</p> <p><i>PM-02-PS01: Undertake risk assessment in accordance with all statutory requirements</i></p> <p><i>PM-02-PS02: Read and interpret electrical drawings</i></p> <p><i>PM-02-PS03: Plan the worksite set-up</i></p>	6
671101000- PM-03	<p>Prepare worksite set up for installing, wiring and connecting electrical equipment and control systems, NQF Level 3, Credits 3.</p> <p><i>PM-03-PS01: Procure resources</i></p> <p><i>PM-03-PS02: Prepare and transport resources</i></p> <p><i>PM-03-PS03: Prepare work site, equipment, tools, consumables and materials</i></p>	4
671101000- PM-04	<p>Install wireways, NQF Level 4, 5 Credits.</p> <p><i>PM-04-PS01: Confirm the selection and installation method of the selected wire ways</i> <i>PM-04-PS02: Use installation tools and equipment</i></p> <p><i>PM-04-PS03: Design and install wire ways</i></p>	6


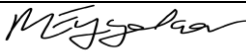


671101000-PM-05	<p>Install, wire and connect electrical equipment and control systems, NQF Level 4, 38 Credits.</p> <p><i>PM-05-PS01: Identify hazards within the installation</i></p> <p><i>PM-05-PS02: Confirm the selection and installation method of the electrical equipment and control systems</i></p> <p><i>PM-05-PS03: Use installation tools and personal protective equipment</i></p> <p><i>PM-05PS04: Install equipment and control systems</i></p> <p><i>PM-05-PS05: Wire electrical equipment and control systems</i></p> <p><i>PM-05-PS06: Terminate and connect cables and conductors</i></p>	48
671101000-PM-06	<p>Conduct pre-commission inspection (power off) and test new and existing installations, NQF Level 4, 5 Credits. <i>PM-06-PS01: Inspect electrical equipment, control systems</i></p>	6
	<p><i>and installations under power off conditions</i></p> <p><i>PM-06-PS02: Test electrical equipment, control systems and installations under power off conditions</i></p>	
671101000-PM-07	<p>Carry out commissioning tests, NQF Level 4, 13 Credits.</p> <p><i>PM-07-PS01: Carry out commissioning tests (with power on) on electrical installations and control systems</i></p> <p><i>PM-07-PS02: Rectify defects found on electrical installations and control systems</i></p> <p><i>PM-07-PS03: Report product deficiencies and rectify workmanship</i></p>	16
671101000-PM-08	<p>Fault find and repair electrical control systems and electrical installations, NQF Level 4, 22 Credits.</p> <p><i>PM-08-PS01: Obtain work instructions and gather drawings and documentation</i></p> <p><i>PM-08-PS02: Select tools and testing instruments</i></p> <p><i>PM-08-PS03: Carry out fault finding</i></p> <p><i>PM-08-PS04: Rectify faults where applicable</i></p> <p><i>PM-08-PS05: Record findings and provide feedback</i></p>	28
	CoC Wireman's License Single Phase	5
	CoC Wireman's License Three Phase	5

	Total	<b>142</b>
		<b>7 Months</b>
<b>Workplace modules – To be covered by the employer</b>		
<b>Module Code</b>	<b>Electrician</b>	<b>Days</b>
671101000-WM-01	Planning and preparation process for the wiring, connection, testing, inspecting, commissioning and maintaining of electrical installations and control systems, NQF Level 4, 8 Credits.	10
671101000-WM-02	Processes of installing, wiring and connecting of electrical equipment and control systems, NQF Level 4, 74 Credits.	82
671101000-WM-03	Processes of testing and inspecting of electrical equipment, control systems and installations, NQF Level 4, 15 Credits.	19
671101000-WM-04	Processes of commissioning electrical installations and control systems, NQF Level 4, 15 Credits.	19
671101000-WM-05	Maintenance processes for electrical installations and control systems, NQF Level 4, 44 Credits.	49
	<b>Total</b>	<b>179</b>
		<b>9 Months</b>



Compiled by: Getrude Rabyang

Approved by Technical Team Members:

<b>Name and Surname</b>	<b>Operating Unit</b>	<b>Signature</b>	<b>Date</b>
Pele Thebe	NC		19/02/2026
Mario Eygelaar	NC		19/02/2026
Phoka Panyane	NW		19/02/2026
Lesego Nkunjana	NW		19/02/2026