

NOCC-A21 Electrician: Competence Package

<b>Relevant Occupation/trade title:</b> Electrician				<b>SAQA ID:</b> 91761	
<b>Learning Area 15: Commission, re- and decommission of electrical systems and equipment (compliance documentation)</b>				<b>Total Hours:</b>	<b>16</b>
<b>Learning Project 1: Commission, re-commission and decommission low voltage <u>single-phase</u> power distribution systems and associated components (incl. distribution boards, wiring, lighting, power outlets, space heating, water heating, fixed kitchen appliances....)</b>				<b>Total Hours:</b>	<b>8</b>
<b>Requisite learning areas/projects to be in place (Pre-requisite and co-requisite):</b>		<ul style="list-style-type: none"> <li>Completed Phase 2</li> </ul>			
<b>Learning project description: Apprentices commission, re-commission and decommission low voltage <u>single phase</u> power distribution systems and associated components (incl. distribution boards, wiring, lighting, power outlets, space heating, water heating, fixed kitchen appliances....)</b>					
Activity phase	Practical Skills Modules Content	Underpinning Knowledge Module Content	Work Experience Module Content	Didactical-methodological advice	Learning materials/Tools and Equipment
Reference to QCTO Curriculum	PM-06-PS01-02, PM07-PS01-03, PM08-PS01-05	KM05-KT03, KM07-KT01, KT05, KT06, KM09-KT01	WM-03-WE01-03, WM-04-WE01-03		
<b>Planning/Preparation</b>	<p><b><u>Provide access to (Given):</u></b> Pre-installed installation (single phase), electrical drawing, materials and equipment as identified in last column;</p> <p><b><u>Apprentices must be able to do/perform the following (hard and soft) skills:</u></b></p> <ul style="list-style-type: none"> <li>Read and interpret the electrical drawing</li> <li>Perform a risk assessment on the task</li> <li>Apply lock out procedures</li> <li>Select measuring instruments for commissioning tests</li> <li>Acquire relevant documentation</li> </ul>	<p><b><u>Knowledge of:</u></b></p> <ul style="list-style-type: none"> <li>De-commissioning of single phase domestic installations (procedures and requirements)</li> <li>Relevant power off and power on tests</li> <li>Commissioning and re-commissioning of single phase domestic installations (procedures and requirements)</li> <li>Safety precautions when commissioning, re-commissioning and decommissioning</li> <li>SANS 10142-1</li> <li>For alternative power</li> </ul>	<p><b><u>Under supervision:</u></b></p> <ul style="list-style-type: none"> <li>De-commission domestic installations</li> <li>Conduct relevant tests for commissioning and re-commissioning</li> <li>Commission and re-commission domestic installations</li> </ul>	Lecture, presentations DVDs, audio-visual Demonstrations Practical applications	<p><b>Print materials, electronic files, software applications incl.:</b></p> <ul style="list-style-type: none"> <li>Training manuals for trainers and apprentices incl. multimedia software</li> <li>Set of presentation aids (videos, slides) for overhead or LED/LCD projectors</li> <li>Statutory requirements:</li> <li>SANS 10142-Part1</li> <li>Municipal by-laws</li> <li>Company policies</li> <li>Electrical drawings</li> </ul> <p><b>Tools, equipment and materials incl.:</b></p> <ul style="list-style-type: none"> <li>Ladder/Step ladder</li> <li>Electrical hand tools standard</li> </ul>

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<b>Implementation/ Execution Repair</b>	<ul style="list-style-type: none"> <li>Plan sequence of testing</li> <li>Perform all relevant power off tests</li> <li>Record the result of each test</li> <li>Identify and rectify faults if applicable</li> <li>Perform additional power off test</li> <li>Perform power on test and commission system</li> </ul>	supplies (generators, PV panels): SANS 10142-1 Annexure S			toolbox <ul style="list-style-type: none"> <li>Measuring instruments</li> </ul> <b>Materials:</b> <ul style="list-style-type: none"> <li>Pre-installed installation (single phase) – Mock domestic installation incl min.:                             <ul style="list-style-type: none"> <li>Distribution boards, wiring, lighting, socket outlets</li> <li>Space heating, water heating, fixed kitchen appliances</li> </ul> </li> <li>Access to appropriate spares in case of faults</li> </ul> <b>PPE:</b> <ul style="list-style-type: none"> <li>Safety overall</li> <li>Safety boots</li> <li>Safety glasses</li> </ul>
<b>Evaluation/ Documentation/ Housekeeping</b>	<ul style="list-style-type: none"> <li>Record required readings and findings of power off and power on test</li> <li>Hand over documentation to relevant person</li> <li>Clean work area after completion of task in accordance with work site procedures and housekeeping standards</li> </ul>				
<b>Total</b>	Hours: 8				
<b>Specialisation additions</b>					
<b>Assessment guidance</b>					
<ul style="list-style-type: none"> <li><b>Self assessment</b></li> <li><b>Group assessment</b></li> <li><b>Theory test</b></li> </ul> <b>Criteria for assessment:</b> <ul style="list-style-type: none"> <li>Correct isolation procedures (de-commissioning)</li> <li>Correct testing procedures and use of instruments (power off and power on)</li> <li>Identification and rectification of faults</li> <li>Documentation of readings and correct conclusions drawn</li> <li>Correct procedures for hand over/commissioning</li> <li>Clean worksite after completion of task and equipment returned safely to store</li> </ul>					