

NOCC-A21 Electrician: Competence Package

Relevant Occupation/trade title: Electrician				SAQA ID: 91761	
Learning Area 15: Commission, re- and decommission of electrical systems and equipment (compliance documentation)				Total Hours:	16
Learning Project 2: Commission, re-commission and decommission low voltage <u>three phase</u> power distribution systems and associated components				Total Hours:	8
Requisite learning areas/projects to be in place (Pre-requisite and co-requisite):		<ul style="list-style-type: none"> • Phase 1 completed • LA15 LP1 			
Learning project description: Apprentices commission, re-commission and decommission low voltage <u>three phase</u> power distribution systems and associated components					
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		
Planning/Preparation	<p>Provide access to (Given): Pre-installed installation (three phase), electrical drawing, materials and equipment as identified in last column;</p> <p>Apprentices must do/perform the following (hard and soft skills):</p> <ul style="list-style-type: none"> • Read and interpret the electrical drawing • Perform a risk assessment on the task • Apply lock out procedures • Select measuring instruments for commissioning tests • Acquire relevant documentation • Plan sequence of testing 	<p>Knowledge of:</p> <ul style="list-style-type: none"> • De-commissioning of three phase commercial/industrial installations (procedures and requirements) • Relevant power off and power on tests • Commissioning and re-commissioning of three phase commercial/industrial installations (procedures and requirements) • Safety precautions when commissioning, re-commissioning and decommissioning • SANS 10142-1 • For alternative power 	<p>Under supervision:</p> <ul style="list-style-type: none"> • De-commission commercial/industrial installations • Conduct relevant tests for commissioning and re-commissioning • Commission and re-commission commercial/industrial installations 	Lecture, presentations DVDs, audio-visual Demonstrations Practical applications	<p>Print materials, electronic files, software applications incl.:</p> <ul style="list-style-type: none"> • Training manuals for trainers and apprentices incl. multimedia software • Set of presentation aids (videos, slides) for overhead or LED/LCD projectors • Statutory requirements: • SANS 10142-Part1 • Municipal by-laws • Company policies • Electrical drawings <p>Tools, equipment and materials incl.:</p> <ul style="list-style-type: none"> • Ladder/Step ladder • Electrical hand tools standard toolbox • Measuring instruments
Implementation/	<ul style="list-style-type: none"> • Perform all relevant power 				

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Execution Repair	<ul style="list-style-type: none"> • off tests • Record the result of each test • Identify and rectify faults if applicable • Perform additional power off test • Perform power on test and commission system 	supplies (generators, PV panels): SANS 10142-1 Annexure S			Materials: <ul style="list-style-type: none"> • Pre-installed installation (three phase) – Mock commercial/industrial installation <ul style="list-style-type: none"> • Three phase DBs • Three phase motor controls • Three phase socket outlets • Access to appropriate spares in case of faults
Evaluation/ Documentation	<ul style="list-style-type: none"> • Record required readings and findings of power off and power on test • Hand over documentation to relevant person • Clean work area after completion of task in accordance with work site procedures and housekeeping standards 				PPE: <ul style="list-style-type: none"> • Safety overall • Safety boots • Safety glasses
Total	Hours: 8				
Specialisation additions					
Assessment guidance					
<ul style="list-style-type: none"> • Self assessment • Group assessment • Theory test <p>Criteria for assessment:</p> <ul style="list-style-type: none"> • Correct isolation procedures (de-commissioning) • Correct testing procedures and use of instruments (power off and power on) • Identification and rectification of faults • Documentation of readings and correct conclusions drawn • Correct procedures for hand over/commissioning • Clean worksite after completion of task and equipment returned safely to store 					