

NOCC-A21 Electrician: Competence Package

Relevant Occupation/trade title: Electrician			SAQA ID: 91761		
Learning Area 11: Install, maintain and troubleshoot low voltage <u>alternative power supply systems and associated equipment</u>			Total Hours:		64
Learning Project 3: Install battery standby/uninterruptable power supply (UPS) systems			Total Hours:		8
Requisite learning areas/projects to be in place (Pre-requisite and co-requisite):		• Phase 1 completed			
Learning project description: Apprentices learn to install battery standby/uninterruptable power supply (UPS) systems					
Activity phase	Practical Skills Modules Content	Underpinning Knowledge Module Content	Work Experience Module Content (Exposure to be given)	Didactical-methodological advice	Learning materials/Tools and Equipment
Reference to QCTO Curriculum	PM-01 (PS-01, 03) PM02 (PS01, 03) PM 03 (PS1, 2,3) PM 05 (PS 01) PM 06 (PS1, 2)	KM-06-KT03 KM-07 (KT01, 02,05) KM-08 (KT01)	WM-01 (WE1-3) WM-02 (WE1-3)		
Planning/ Preparation	<p><u>Provide access to (Given):</u> Uninterruptable power supply system; conductors, wire-ways, protection devices.</p> <p><u>Apprentices must be able to do/perform the following (hard and soft) skills:</u></p> <ul style="list-style-type: none">Wear correct PPEComplete documentationConduct risk assessmentSelect the correct tools and equipmentTransport all materials and equipment safely to workstation	<p><u>Knowledge of:</u></p> <ul style="list-style-type: none">Basic operating principles of UPS systemsWork procedures and work documents related to installations and wiring and manufacturer's specifications	<p><u>Under supervision:</u> <i>If workplace allows for this exposure:</i></p> <ul style="list-style-type: none">Install a UPS systems as per manufacturer specificationsConduct power on test	Lecture, presentations DVDs, audio-visual Group work, Internet	<p>Print materials, electronic files, software applications incl.:</p> <ul style="list-style-type: none">Training manuals for trainers and apprentices incl. multimedia softwareSet of presentation aids (videos, slides) for overhead or LED/LCD projectors <p>Tools, equipment and materials incl.: Electrical toolbox</p> <p>Materials</p> <ul style="list-style-type: none">Manufactures specifications
Implementation/ Execution	<ul style="list-style-type: none">Install and UPS systemConduct a power-off test to				

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	<div>ensure that the installation adheres to statutory requirements</div> <ul style="list-style-type: none">• Conduct a power-on test to check the operation of the system by changing it over to alternative supply (UPS)				<ul style="list-style-type: none">• Company specific work-site procedures• Multi-meter• UPS set <p>PPE:</p> <ul style="list-style-type: none">• Safety overall• Safety boots
Evaluation/ Documentation	<ul style="list-style-type: none">• Test the UPS system to ensure that it is working correctly (functionality test)• Report work progress to appropriate personnel• Inspect and clean tools• Store and secure tools and materials• Complete applicable work documentation• Perform housekeeping				
Total	Hours: 8				
Specialisation additions					
Assessment guidance					
<ul style="list-style-type: none">• Self assessment• Group assessment• Theory test <ul style="list-style-type: none">• Correct PPE is worn• Risk assessment undertaken• Necessary documentation completed• UPS system tested to ensure functionality• Task is completed as per job card• Housekeeping performed					