

NOCC-A21 Electrician: Competence Package

Relevant Occupation/trade title: Electrician			SAQA ID: 91761		
Learning Area 11: Install, maintain and troubleshoot low voltage <u>alternative</u> power supply systems and associated equipment			Total Hours:		64
Learning Project 5: Install power supply systems for construction & demolition sites			Total Hours:		8
Requisite learning areas/projects to be in place (Pre-requisite and co-requisite):		• Phase 1 completed			
Learning project description: Extensions to a shopping centre in your area are to be done by a local contractor. You are required to install a power supply for this construction site. Plan, wire, connect and test this temporary installation.					
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, 02, 03) PM-02 (PS 01, 02, 03) PM-03 (PS01, 02, 03) PM-04 (PS01, 02, 03) PM-05 (PS 01-06)	KM-06-KT03 KM-07(KT01,04, 05)	WM-01 (WE1-3) WM-02 (WE1-3) WM-03 (WE1-3)		
Planning/ Preparation	<p><u>Provide access to (Given):</u> Site layout, circuit diagrams, electrical equipment for temporary supply, relevant tools and measuring instruments as per last column, statutory requirements</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 PPERead and interpret job instructionsComplete work permitConduct 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">SANS 10142 Section 7.4Construction regulationsReading and interpreting site plansFundamentals of electricityInstalling and wiring power supply for construction and demolition sitesProtective devices, circuit breakers, earth leakage relays.	<p><u>Under supervision:</u> <i>If workplace can provide this exposure:</i></p> <p>Install a power supply system for construction and demolition site.</p> <ul style="list-style-type: none">Install and wire a distribution boardInstall and connect mains to distribution boardConduct pre-commission inspection (power on and off) and test new and existing installations	Lecture, presentations DVDs, audio-visual Group/individual work Training models	<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 projectorsSANS 10142 Section 7.4 <p>Tools, equipment and materials incl.:</p> <p>Electrical toolbox</p>

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Implementation/ Execution	<ul style="list-style-type: none"> • Install and wire a distribution board • Install and connect mains to distribution board • Conduct pre-commission inspection (power on and off) and test new and existing installations 				Materials <ul style="list-style-type: none"> • SANS 10142-8 • Wiring code of practice. • Construction regulations • Site plan
Evaluation/ Documentation	<ul style="list-style-type: none"> • Evaluates the correctness of the completed task according to drawings and/or instructions • Report work progress to appropriate personnel • Inspect and clean tools • Store and secure tools and materials • Complete applicable work documentation • Perform housekeeping 				Equipment <ul style="list-style-type: none"> • Multimeter • Insulation tester • Phase rotation meter • Earth leakage tester • Distribution board • Earth leakages • Circuit breakers • Cables and accessories PPE: <ul style="list-style-type: none"> • Safety overall • Safety boots
Total	Hours: 8				
Specialisation additions	None				
Assessment guidance					
<ul style="list-style-type: none"> • Self assessment • Group assessment <p>Theory test</p> <p>Criteria for assessment:</p> <ul style="list-style-type: none"> • Correct PPE is worn • Task is completed as per job card • Correct cable size used • Over-current devices selected are at the correct rating • Safety procedures are followed • Risk assessment undertaken • Correct documentation completed 					

- Housekeeping is performed

Work in progress