

NOCC-A21 Electrician: Competence Package

Relevant Occupation/trade title: Electrician				SAQA ID: 91761	
Learning Area 12: Identify, construct and troubleshoot basic electronic circuits				Total Hours:	128
Learning Project 1: Gain an overview, identify and test electronic components				Total Hours:	64
Requisite learning areas/projects to be in place (Pre-requisite and co-requisite):		<ul style="list-style-type: none"> Phase 1 completed 			
Learning project description: Apprentices gain an overview, identify and test electronic 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-01-PS03	KM-03-KT02	WM-None		
Planning/Preparation	<p><u>Provide access to (Given):</u> Boards with electronic components, datasheets, materials and equipment as identified in last column;</p> <p><u>Apprentices must be able to do/perform the following (hard and soft) skills:</u></p> <ul style="list-style-type: none"> Identify components and explain their function 	<p><u>Knowledge of:</u></p> <ul style="list-style-type: none"> Theory of conductors, semi-conductors, resistor, capacitor, inductors, diodes Function of electronic components Electronic symbols Testing of electronic components Value calculations Use of the colour chart Use of data sheets Statutory requirements as per work conducted 	<p><u>Under supervision:</u> <i>If the workplace allows for this exposure:</i></p> <ul style="list-style-type: none"> Identify and test electronic components (where applicable) 	<p>Lecture, presentations DVDs, audio-visual Demonstrations Practical applications</p>	<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 Datasheets or access to datasheets <p>Tools, equipment and materials incl.:</p> <ul style="list-style-type: none"> Measuring instruments <p>Materials:</p>
Implementation/Execution Repair	<ul style="list-style-type: none"> Calculate values of the components Use colour charts and data sheets in conjunction with electronic components Test the electronic components 				
Evaluation/Documentation	<ul style="list-style-type: none"> Confirm values with datasheet or colour code Document test results Clean work area after 				

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	completion of task in accordance with work site procedures and housekeeping standards				<ul style="list-style-type: none"> • Boards with electronic components: • Resistor • Capacitor • Inductors • Semi-conductor devices • Diodes • Colour chart <p>PPE: Safety boots</p>
Total	Hours: 64				
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 identification of electronic components • Correct value of electronic components • Correct testing method • Test functionality of components • Ability to read and interpret colour chart and data sheets • Clean worksite after completion of task and equipment returned safely to store 					