

NOCC-A21 Electrician: Competence Package

Relevant Occupation/trade title: Electrician			SAQA ID: 91761		
Learning Area 5: Install wiring systems and accessories (low voltage) in domestic buildings and premises (incl. earthing and bonding)			Total Hours:		128
Learning Project 5: Install internal and external single phase socket outlets (incl. damp-proof)			Total Hours:		8
Requisite learning areas/projects to be in place (Pre-requisite and co-requisite):		LA 5 – LP4			
Learning project description: Install internal and external single phase socket outlets (incl. damp-proof) (power off circuit)					
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-05-PS01, PM-05-PS02, PM-05-PS04, PM-05-PS05, PM-06-PS01 PM-07-PS01-03 PM-08-PS01-03	KM-05-KT01 KM-05-KT02 KM-05-KT03	WM-01-WE01-03 WM-02-WE01-03 WM-03-WE01-03		
Planning/ Preparation	<p><u>Provide access to (Given):</u> Work tasks/job requests and material and equipment as specified in last column;</p> <p><u>Apprentices must be able to do/perform the following (hard and soft) skills:</u></p> <p>Prepare for the installation of single phase circuits for socket outlets</p> <ul style="list-style-type: none">Identify, obtain and understand statutory requirements for a given work areaIdentify and establish risk	<p><u>Knowledge of:</u> General safety rules and procedures pertaining to the installation of socket outlets</p> <ul style="list-style-type: none">Regulations pertaining to the installation of socket outlets. (SANS 10142-1)Overview of applicable protective measures (circuit breakers for socket outlets).Types and forms of socket outlet installationsInstallation zones and routesTesting of the electrical installation (Visual	<p><u>Under supervision:</u></p> <ul style="list-style-type: none">Analyse simple and gradually more complex domestic socket outlet systemsDevelop work plans for domestic socket outlet installations starting from one room to the whole houseIdentify installation materials needed for domestic socket outlet installationsInitially perform preparatory works under	<ul style="list-style-type: none">Self-study assignmentsUsing of internet sources, text books and work sheetsInstructionObservation methodDescription and demonstration	<p>Print materials, electronic files, software applications incl.:</p> <ul style="list-style-type: none">OHS ActSANS 10142-1Text booksManuals for trainers and apprentices incl. multimedia softwareSet of presentation aids (videos, slides) for overhead or LED/LCD projectors <p>Access equipment</p>

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	<p>control measures and procedures in preparation for the work</p> <ul style="list-style-type: none"> • Prepare installation in consultation with others affected by the work • Determine the scope and location of the work to be undertaken from documentation • Identify and check material needed for the installation work against job requirements • Identify and check tools, equipment and measuring devices needed for the installation work 	<p>inspection, continuity test,</p> <p>Circuits for socket outlets encompassing:</p> <ul style="list-style-type: none"> • The purpose of socket outlets • Requirements concerning the polarity of switched socket outlets • Number of socket outlets connected to 20 A circuit breakers • Installation methods of a single phase socket outlet circuits • Testing (dead testing only) for correct compliance with SANS standards 	<p>direct and constant supervision of a qualified Electrician</p> <ul style="list-style-type: none"> • Undertake all preparatory installation activities without assistance but regular supervision (2nd year) • Perform socket outlet installations in ceilings/walls/floors under direct and constant supervision until competent. • Install socket outlets without assistance but regular supervision • Engage in regular housekeeping activities, tool and equipment maintenance 		<p>incl.:</p> <ul style="list-style-type: none"> • Ladders <p>Hand- & power tools incl.:</p> <ul style="list-style-type: none"> • Standard electrician's toolbox <p>Measuring and testing instruments incl.:</p> <ul style="list-style-type: none"> • Measuring tape • Continuity tester <p>Training workshop and laboratory equipment incl.:</p> <ul style="list-style-type: none"> • Installation cabins/ cubicles • Set of various standard types (single, double, switched etc.) of reusable single phase, flush and surface mount sockets for wall/floor indoor/ outdoor, socket types] current and IP ratings
Implementation/ Execution	<p>Install internal and external single phase socket outlets</p> <ul style="list-style-type: none"> • Follow risk control measures and procedures for carrying out the work • Install socket outlets and accessories according to given installation conditions to comply with technical standards and job specifications • Install socket outlets in the required locations and within acceptable standards • Terminate wiring at socket outlets in accordance with manufacture's specifications • Carry out installation efficiently without unnecessary waste of 				

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	materials or damage to circuits, appliances, machines, the surrounding environment				
Evaluation/ Documentation	Complete installation work and conduct housekeeping activities <ul style="list-style-type: none"> • Complete work and notify appropriate personnel • Conduct housekeeping activities • Maintain and store tools and equipment in accordance with site/ company procedures • Finalise work completion documentation 				
Total	Hours: 8				
Specialisation additions					
Assessment guidance					
Criteria for assessment: <ul style="list-style-type: none"> • Socket outlets selected and installed according to manufacturers specifications and complying with SANS-10142-1 • Circuits correctly connected, mechanically tight and neatly loomed to protection and control devices • Relevant tools and equipment were used according to job specifications and statutory requirements • Worksite was left neat and tidy 					