



Information:  
Constructing and commissioning



MINISTÈRE DE L'ÉDUCATION NATIONALE

MINISTÈRE DE L'ENSEIGNEMENT SUPÉRIEUR DE LA RECHERCHE ET DE L'INNOVATION

Life Is On

Schneider Electric



**DESIGN, CONSTRUCT AND COMMISSION THREE PHASE ELECTRICAL CIRCUITS: 259200**

Physical planning and construction	Electrical infrastructure construction
ABET band: Undefined	NQF level: Level 4
NQF level: Level 4	Credits: 10
Unit standard type: Regular	

**SPECIFIC OUTCOMES AND ASSESSMENT CRITERIA:**

Specific outcome	Assessment criteria
<b>SO1: DESIGN THREE PHASE CIRCUIT DIAGRAM</b>	<p><b>AC1.1:</b> Instructions are interpreted according to work site procedures.</p> <p><b>AC1.2:</b> Symbols used conform to ISO standards.</p> <p><b>AC1.3:</b> The function of each component is understood and described correctly.</p> <p><b>AC1.4:</b> Circuit diagrams are designed neatly and symmetrically according to instructions.</p> <p><b>AC1.5:</b> Circuit diagrams are evaluated for functionality according to instructions.</p>
<b>SO2: PLAN WORK TASK</b>	<p><b>AC2.1:</b> Job instruction is evaluated and a sequence of operation is determined.</p> <p><b>AC2.2:</b> Electrical drawings are correctly interpreted according to the designed circuit and applicable statutory requirements.</p> <p><b>AC2.3:</b> Components and materials are correctly identified and selected as per applicable electrical drawings.</p> <p><b>AC2.4:</b> Equipment needed to wire and commission are inspected for functionality, safety and available for use.</p> <p><b>AC2.5:</b> Permission is obtained to carry out task according to instructions and drawings.</p> <p><b>AC2.6:</b> Work area is prepared according to worksite procedures.</p>
<b>SO3: CONSTRUCT THREE PHASE ELECTRICAL CIRCUITS</b> (SANS 10142-1)	<p><b>AC3.1:</b> Site specific safety procedures are adhered to throughout the construction of the electrical circuits.</p> <p><b>AC3.2:</b> Construction and wiring of circuits are completed according to the design.</p> <p><b>AC3.3:</b> Cables and conductors are terminated, numbered and connected according to electrical drawings and statutory requirements.</p> <p><b>AC3.4:</b> All components are fitted, assembled and labelled according to electrical drawings and statutory requirements.</p>
<b>SO4: COMMISSION THREE PHASE ELECTRICAL CIRCUITS</b> (continuity test, insulation resistance, polarity, voltage, phase rotation and earth leakage tests).	<p><b>AC4.1:</b> Applicable test instruments are selected and evaluated for functionality and safety prior to conducting tests.</p> <p><b>AC4.2:</b> Commissioning tests are carried out safely and according to statutory requirements.</p> <p><b>AC4.3:</b> Test results are accurately recorded on commissioning report and reliably communicated according to worksite procedures.</p> <p><b>AC4.4:</b> Commissioning of circuits is done according to worksite procedures.</p>