

|               |   |
|---------------|---|
| 1. Title      | Perform electrical and mechanical installation and testing according to the drawings and specifications of electrical devices and wiring  |
| 2. Code       | EMCUIN306A  |
| 3. Range      | Interpret the engineering drawings of electrical devices, circuits and wiring and able to apply relevant information for electrical and mechanical works.   |
| 4. Level      | 3   |
| 5. Credit     | 4   |
| 6. Competency | <p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Uses of the drawings of electrical devices, circuits and wiring</p> <ul style="list-style-type: none"> <li>◆ Understand the uses of various types of engineering drawings of electrical works</li> <li>◆ Identify different versions of engineering drawings of electrical works</li> <li>◆ Capable to apply electrical symbols, scaling calculations and relevant engineering drawings of electrical works</li> </ul> <p>6.2 Obtain relevant information of electrical devices, control circuits and wiring drawings to complete installation and testing of electrical systems</p> <ul style="list-style-type: none"> <li>◆ Obtain suitable electrical engineering drawings according to project requirements</li> <li>◆ Capable to obtain relevant information of the main circuit, including: <ul style="list-style-type: none"> <li>• Connection of the main circuit</li> <li>• Details of power distribution</li> <li>• Power switch interlock</li> </ul> </li> <li>◆ Capable to obtain relevant information of electrical equipment and control circuits, including: <ul style="list-style-type: none"> <li>• Principles of control</li> <li>• Control circuits</li> <li>• Control components, including circuit breakers, relays, push-buttons and their contacts</li> <li>• Electronic control circuits</li> </ul> </li> <li>◆ Capable to obtain information of control circuit and wiring drawings, including: <ul style="list-style-type: none"> <li>• Selection of cables</li> <li>• Classification of cables</li> <li>• Laying of cables</li> <li>• Wiring conduits</li> <li>• Wiring trunkings</li> <li>• Identification and marking of cables</li> <li>• Connection of cables</li> </ul> </li> </ul> |

|                               |   |
|-------------------------------|---|
|                               | <ul style="list-style-type: none"> <li>◆ Capable to obtain relevant information from drawings of electrical devices, circuits and wiring for performing an electrical and mechanical task, such as the information below for installation and testing of a starter circuit for a three-phase AC motor: <ul style="list-style-type: none"> <li>• Principles of control circuit interlock</li> <li>• Conduits and trunkings required</li> <li>• Laying of cables</li> <li>• Connection of cables</li> <li>• Identification and marking of cables</li> </ul> </li> </ul> |
| <p>7. Assessment Criteria</p> | <p>The integrated outcome requirement of this unit of competency is:</p> <p>(i) Capable to select suitable engineering drawings of electrical works, and obtain relevant information from drawings for completion of installation and testing of an electrical and mechanical system and equipment, such as the installation and testing of a power distribution system in a multi-storey building.</p>   |
| <p>8. Remarks</p>             | <p>The credit value of this unit of competency is set on the presumption that the person already possesses basic knowledge of electricity.</p>  |