

1. Title	Design basic low voltage power supply systems
2. Code	EMELDE321A
3. Range	Applicable to the design, installation and project management of electrical work. Implement the basic design of low voltage power supply systems directly fed by low voltage underground distribution cables, including relevant power supply arrangement and protection and control circuits.
4. Level	3
5. Credit	6
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Interpret the basic design of low voltage power supply systems ♦ Interpret the basic design concept related to the power supply arrangement, protection and control circuits, wiring method and various kinds of final circuits of low voltage power systems directly fed by low voltage underground distribution cables, such as:</p> <ul style="list-style-type: none"> <li>• Circuit isolation, circuit organization management, classification of circuits</li> <li>• Over-current protection and earthing fault protection</li> <li>• Earthing system</li> <li>• Calculation of current demand and selection of cables</li> <li>• Surface wiring system</li> <li>• Concealed wiring system</li> <li>• Ring and radial socket circuits</li> <li>• Various kinds of lighting circuits</li> </ul> <p>6.2 Implement basic distribution and final circuit design for low voltage electrical installations according to low power system design requirements ♦ Implement the design of basic distribution and final circuits for low voltage electrical installations according to low voltage power system design and legal requirements, such as the distribution arrangement, protection and control circuits, wiring method, earthing system, various kinds of final circuits</p>
7. Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are:</p> <p>(i) Capable to interpret the basic design concept of low voltage power systems directly fed by low voltage underground distribution cables; and</p> <p>(ii) Capable to implement the design of basic distribution and final circuits for low voltage electrical installations.</p>
8. Remarks	