

1. Title	Understand basic intallation concept, popular neon materials and details of simple shop drawings of neon installations
2. Code	EMELDE102A
3. Range	With regard to electrical engineering design and installation of neon installations, understand the installation concept of neon installations; the arrangement and protection of electrical installations; the functions and application of various kinds of neon materials, electrical equipment, tools and meters; and the details of shop drawings of electrical installations.
4. Level	1
5. Credit	6
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Basic intallation concept of neon installations; functions and application of various kinds of neon materials, installation tools and meters; power supply arrangement and protection of neon systems; and the details of simple shop drawings</p> <ul style="list-style-type: none"> ◆ Understand the basic installation concept of neon installations such as site requirements, fire switches and their installation height, positions to install high voltage cables and high voltage circuits, supporting structures for neon installations, etc. ◆ Understand the functions and application of various kinds of neon installation materials, including neon tube materials, step-up transformers, various accessories and metal conduits for surface wiring, various kinds of cables, cable ducts and accessories, and fireman’s switches commonly used for fixed electrical installations ◆ Understand the craftsmanship of wiring using metal conduits, etc. ◆ Understand the fabrication and installation of cable ducts <ul style="list-style-type: none"> • Fabricate different shapes of cable ducts as required • Install the trunking and duct the lines according to drawings ◆ Understand the functions and application of neon tube power circuits: <ul style="list-style-type: none"> • Control and protection circuits of neon tube • Power circuit of step-up transformer • Power circuits of distribution board ◆ Understand how to use instrument to perform the following tests: <ul style="list-style-type: none"> • Insulation resistance test for electrical installations • Continuity and tripping tests for power circuit and circuit protective conductors • Polarity test

	<ul style="list-style-type: none"> ◆ Understand applications of the installation tools for various kinds of neon systems: <ul style="list-style-type: none"> • Neon gas injector, heating facilities • Measuring tools: steel ruler, tape measure, calliper • Cutting tools: iron saw, cutter, plier • Conduit bending tools: conduit benders, conduit bending machine • Power tools: power drill, power saw, threading machine • Tap and tap wrench <p>6.2 Understand simple shop drawings of the electrical installations of neon systems</p> <ul style="list-style-type: none"> ◆ Understand simple drawings related to installation work, such as: <ul style="list-style-type: none"> • Neon tube control and protection circuits • Electrical installation wiring diagrams • Electrical installation layouts • Shop drawings of electrical installations • Layout plans
7. Assessment Criteria	<p>The integrated outcome requirement of this unit of competency is:</p> <ul style="list-style-type: none"> (i) Capable to understand the arrangement, protection systems, and design and assembling methods of electrical installations as specified; and (ii) Capable to understand simple shop drawings of electrical installations of neon systems, to receive and convey instructions on basic electrical installation procedures, and perform simple tasks for installing electrical installations of neon systems under instruction.
8. Remarks	