

1. Title	Apply basic knowledge of central air-conditioning systems
2. Code	EMACDE202A
3. Range	Apply basic knowledge of central air-conditioning systems in the air-conditioning systems air-conditioning systems 的 the design, installation, testing, commissioning, operation, repair, maintenance and project management of central air-conditioning systems at design studios or central air-conditioning system work sites.
4. Level	2
5. Credit	6
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Basic knowledge of central air-conditioning systems</p> <ul style="list-style-type: none"> <li>◆ Understand the types and characteristics of central air-conditioning systems, including: <ul style="list-style-type: none"> <li>• Types and characteristics of central air-conditioning systems</li> <li>• Construction and working principles of fan coil units</li> <li>• Difference between constant air volume system and variable air volume system</li> </ul> </li> <li>◆ Understand the equipment layout of central air-conditioning water systems, air systems and refrigeration systems, including: <ul style="list-style-type: none"> <li>• Equipment of water systems for central air-conditioning system and its layout plans</li> <li>• Equipment of air system for central air-conditioning system and its layout plans</li> <li>• Equipment of refrigeration system for central air-conditioning system and its layout plans</li> </ul> </li> <li>◆ Understand the working principles of central air-conditioning electrical control systems, including: <ul style="list-style-type: none"> <li>• Purpose of central air-conditioning electrical control systems</li> <li>• Meanings of symbols of typical electrical control components</li> <li>• Principles of self-lock, interlock and sequential control of different control devices in the electrical control wiring diagrams for central air-conditioning system</li> </ul> </li> <li>◆ Understand the functions and working principles of safety protection devices and control devices for central air-conditioning system, including: <ul style="list-style-type: none"> <li>• Protection devices for central air-conditioning system (including high pressure switch, low pressure switch, oil pressure switch, oil heater, overload protector, water flow switch and air flow switch)</li> <li>• Control devices for central air-conditioning systems (including solenoid valve, thermal expansion valve, evaporating pressure regulating valve, condensing pressure regulating valve and thermostats)</li> </ul> </li> </ul>

	<p>6.2 Application of knowledge of central air-conditioning systems</p> <ul style="list-style-type: none"> <li>◆ Identify various types of equipment for central air-conditioning system</li> <li>◆ Read the layout plans of equipment for central air-conditioning system</li> <li>◆ Select various types of devices for central air-conditioning system</li> </ul>
<p>7. Assessment Criteria</p>	<p>The integrated outcome requirements of this unit of competency are:</p> <ul style="list-style-type: none"> <li>(i) Capable to apply basic knowledge of central air-conditioning systems in general design, installation, testing, commissioning, operation, repair, maintenance and project management work; and</li> <li>(ii) Capable to explain to clients the basic knowledge of central air-conditioning systems.</li> </ul>
<p>8. Remarks</p>	<p>This unit of competency is applicable to practitioners engaged in general design, installation, testing, commissioning, operation, repair, maintenance and project management of central air-conditioning systems.</p>