

1. Title	Apply knowledge of safety, health and environmental protection for air-conditioning and refrigeration engineering branch
2. Code	EMACSH201A
3. Range	Apply knowledge of safety, health and environmental protection for air-conditioning and refrigeration engineering branch at work sites, design studios or all kinds of working environment to reduce hazards in work sites and to coordinate the safety, health and environmental protection management work.
4. Level	2
5. Credit	6
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Knowledge of safety, health and environmental protection for air-conditioning and refrigeration engineering branch</p> <ul style="list-style-type: none"> <li>◆ Understand the responsibilities of staff at all levels regarding safety and health, including being able to : <ul style="list-style-type: none"> <li>• State clearly the responsibilities of employers, premise occupants and persons in charge regarding safety and health required by the Factories and Industrial Undertakings Ordinance (Sections 6A)</li> <li>• State clearly the general safety rules to be followed by employees in work required by the Factories and Industrial Undertakings Ordinance (Sections 6B)</li> </ul> </li> <li>◆ Understand basic industrial safety knowledge, including being able to : <ul style="list-style-type: none"> <li>• Explain what is a safe working environment</li> <li>• Explain safe attire for work</li> <li>• Select proper personal protective equipment</li> <li>• Explain general safety measures to prevent fall of person</li> <li>• Explain proper procedures for manual lifting</li> <li>• Explain general ways of machine protection</li> </ul> </li> <li>◆ Understand the types of accidents in the air-conditioning and refrigeration processes and their preventions, including being able to: <ul style="list-style-type: none"> <li>• List the safety precautions for general air-conditioning and refrigeration processes</li> <li>• List the safety precautions for working in cold storages</li> <li>• List the safety precautions when installing and repairing window-type and split-type air-conditioners</li> </ul> </li> <li>◆ Understand the types of general electrical appliance accidents and their preventions, including being able to: <ul style="list-style-type: none"> <li>• State the safety requirements of general use of electricity</li> <li>• State accidents happened during the repair of general electrical appliances and their preventions</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• State accidents commonly seen at work sites and their preventions</li> <li>◆ Understand general fire preventive measures, including being able to: <ul style="list-style-type: none"> <li>• List measures to prevent fire</li> <li>• List the specifications of fire escape</li> <li>• List fire handling ways</li> </ul> </li> <li>◆ Understand the code of safety on general manual arc welding and oxygen-acetylene gas welding, including being able to: <ul style="list-style-type: none"> <li>• List the code of safety for operating manual arc welding</li> <li>• List the code of safety for operating oxygen-acetylene gas welding</li> </ul> </li> <li>◆ Understand the code of safety for typical refrigerants, including being able to: <ul style="list-style-type: none"> <li>• List the hazards of refrigerants</li> <li>• List the code of safety for transporting and storing refrigerants</li> </ul> </li> <li>◆ Understand the impact of refrigerants on environment, including being able to: <ul style="list-style-type: none"> <li>• State the impact of global warming on human being</li> <li>• Explain how refrigerants cause global warming and ways to improve the situation</li> <li>• State the impact of the depletion of ozone layer on human being</li> <li>• Explain how refrigerants deplete the ozone layer and ways to improve the situation</li> <li>• list refrigerants that cause global warming and deplete the ozone layer</li> </ul> </li> <li>◆ Understand the impact of legionnaires' disease on human health and its prevention, including being able to: <ul style="list-style-type: none"> <li>• Explain the symptoms and causes of the disease</li> <li>• Explain the disease spreads and its impact on human health</li> <li>• State ways to prevent the disease</li> </ul> </li> </ul> <p>6.2 Application of knowledge of safety, health and environmental protection for air-conditioning and refrigeration engineering branch</p> <ul style="list-style-type: none"> <li>◆ Apply knowledge of safety, health and environmental protection for air-conditioning and refrigeration engineering branch to design safe, healthy and environmental friendly air-conditioning and refrigeration systems; protect the safety, health and environment when carrying out air-conditioning and refrigeration works; and promote to others the awareness of safety, health and environmental protection</li> </ul>
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7. Assessment Criteria	The integrated outcome requirement of this unit of competency is:  (i) Capable to Apply knowledge of safety, health and environmental protection for air-conditioning and refrigeration engineering branch to solve the problems involved in air-conditioning and refrigeration works; and communicate with the sector and clients.
8. Remarks	This unit of competency is applicable to practitioners of the air-conditioning and refrigeration branch.