

1. Title	Design fire detection and alarm systems and equipment
2. Code	EMFSDE503A
3. Range	Analyze, reorganize, assess and integrate information critically by dealing with abstract ideas, concepts and thoughts; instruct subordinates to perform different levels of tasks of designing fire detection and alarm systems and equipment according to client needs, building codes and limitations.
4. Level	5
5. Credit	6
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Knowledge of designing fire detection and alarm systems and equipment</p> <ul style="list-style-type: none"> <li>◆ Master the construction, working principles and characteristics of different types of detection and alarm systems and equipment, including: <ul style="list-style-type: none"> <li>• Conventional (electronic) type</li> <li>• Addressable (intelligent) type</li> </ul> </li> <li>◆ Understand building uses, architectural design codes and client needs</li> <li>◆ Understand the design standards and major requirements of fire detection and alarm systems and equipment, including: <ul style="list-style-type: none"> <li>• The Code of Practice for Fire Service Installations and Equipment</li> <li>• Recognized international standards (BSEN, NFPA)</li> </ul> </li> </ul> <p>6.2 Design fire detection and alarm systems and equipment</p> <ul style="list-style-type: none"> <li>◆ Lead subordinates to perform various types of tasks of designing fire detection and alarm systems and equipment according to client needs, manufacturer guidelines, recognized standards and relevant local regulations</li> <li>◆ Formulate the system drawings and outline design layout plans of various types of equipment according to building codes and limitations</li> <li>◆ Analyze and select appropriate types of equipment</li> <li>◆ Calculate and determine the quantities and positions of fire detection and alarm systems and equipment according to building codes and limitations</li> <li>◆ Formulate the specifications of various types of fire detection and alarm systems and equipment</li> </ul> <p>6.3 Professionalism in designing fire detection and alarm systems and equipment</p> <ul style="list-style-type: none"> <li>◆ Lead subordinates to design fire detection and alarm systems and equipment according to legal requirements, codes of practice and design standards</li> </ul>

7. Assessment Criteria	The integrated outcome requirements of this unit of competency are:  (i) Capable to apply special and innovative techniques and lead subordinates to perform tasks of designing fire detection and alarm systems and equipment according to client needs and building codes and limitations; and  (ii) Capable to provide the sector and clients with designs of fire detection and alarm systems and equipment.
8. Remarks	The credit value of this unit of competency is set on the presumption that the person already possesses general knowledge of fire detection and alarm systems and equipment.