| | |
|---|---|
| 1. Title | Design smoke prevention, smoke extraction, staircase pressurization and VAC systems for buildings |
| 2. Code | EMACDE604A |
| 3. Range | Use highly specialized knowledge and innovative skills, at design studios, and assess a wide range of information, so as to design different types of smoke prevention, smoke extraction, staircase pressurization and VAC systems for buildings. |
| 4. Level | 6 |
| 5. Credit | 12 |
| 6. Competency | Performance Requirements<br>6.1 Knowledge of designing smoke prevention, smoke extraction, staircase pressurization and VAC systems for buildings<br>♦ Understand the design requirements of smoke prevention, smoke extraction, staircase pressurization and VAC systems, including:<br>• Explaining the concept of fire prevention zones and smoke prevention zones in high-rise buildings<br>• Explaining the importance and classification of smoke prevention, smoke extraction, staircase pressurization and VAC systems in high-rise buildings<br>• Explaining the design requirements of static smoke extraction systems<br>• Explaining the design requirements of dynamic smoke extraction systems<br>• Explaining the design requirements for smoke extraction through the atrium of a high-rise building<br>• Explaining the design requirements of staircase pressurization systems<br>• Explaining the design requirements of smoke prevention and smoke extraction systems in super high-rise buildings<br>• Explaining the design requirements of VAC systems<br>♦ Analyze regulations, international standards and strategies relevant to smoke prevention, smoke extraction, staircase pressurization and VAC systems<br>♦ Analyze whether the smoke prevention, smoke extraction, staircase pressurization and VAC system in a high-rise building comply with legal requirements<br>♦ Analyze whether the smoke prevention, smoke extraction, staircase pressurization and VAC system in a high-rise building comply with safety and economical requirements |

| | | |
|---|---|---|
| | 6.2 Methods and procedures of designing smoke prevention, smoke extraction, staircase pressurization and VAC systems for buildings | ♦ Design smoke prevention, smoke extraction, staircase pressurization and VAC systems for high-rise buildings according to the requirements of the Fire Services Department<br>♦ Formulate and assess the design requirements of smoke prevention, smoke extraction, staircase pressurization and VAC systems for high-rise buildings, including:<br>• Determining the design requirements of smoke prevention, smoke extraction, staircase pressurization and VAC systems for high-rise buildings<br>• Assessing whether the smoke prevention, smoke extraction, staircase pressurization and VAC systems and equipment in a high-rise building comply with legal, safety and economical requirements<br>♦ Formulate and assess the technical specifications of smoke prevention, smoke extraction, staircase pressurization and VAC systems<br>♦ Formulate and assess the technical requirements for testing and repairing smoke prevention, smoke extraction, staircase pressurization and VAC systems |
| | 6.3 Professionalism in designing smoke prevention, smoke extraction, staircase pressurization and VAC systems for buildings | ♦ Understand legal requirements and codes of practice, analyze and assess different types of information and use highly specialized knowledge and techniques to design innovative smoke prevention, smoke extraction, staircase pressurization and VAC systems for buildings |
| 7. Assessment Criteria | The integrated outcome requirement of this unit of competency is:<br>(i) Capable to design innovative, practical and economical smoke prevention, smoke extraction, staircase pressurization and VAC systems for buildings systematically and effectively. | |
| 8. Remarks | The credit value of this unit of competency is set on the presumption that the person already possesses general knowledge of smoke prevention, smoke extraction, staircase pressurization and VAC systems for buildings. | |