1. Title	Design LPG filling station and supply system	
2. Code	EMGADE504A	
3. Range	Design a LPG filling station and supply system in a cost-effective way to meet the present and future needs as well as the requirements of the gas safety regulation and the codes of practice; take the initiative to accomplish the design task independently, to coordinate with other contractors and relevant government departments, and to brief the engineering personnel or people concerned on the engineering details.	
4. Level	5	
5. Credits	11	
6. Competency		<u>Performance Requirements</u>
	6.1 Knowledge and principles of designing LPG filling station and supply system	♦ Follow the manufacturer's and technical instructions to install equipment to meet the explosion-proof specifications ♦ Understand the filling station system flow ♦ Understand the pneumatic control principles ♦ Estimate the construction flow of the filling station ♦ Understand the internal structure of the dispenser
	6.2 Methods and procedures of designing LPG filling station and supply system	♦ Design LPG pipes with suitable diameter ♦ Design the LPG piping path ♦ Design the pneumatic control piping path ♦ Design the number of emergency shut-down buttons ♦ Design the location of emergency shut-down buttons ♦ Design the number of dispensers ♦ Design the locations of dispensers ♦ Design the locations of LPG tanks ♦ Design the number of LPG pumps

		♦ Design the locations of LPG off-loading system ♦ Design the locations of ventilating pipes for the LPG tank ♦ Design the pneumatic control system
	6.3 Professional knowledge and responsibilities for designing LPG filling station and supply system	♦ Apply all the provisions in the Gas Safety (Gas Supply) Regulations under the Gas Safety Ordinance, Cap. 51 ♦ Apply all the provisions in the Code of Practice for Hong Kong LPG Industry: Module 1 [LPG Compounds and Cylinder Stores] ♦ Apply all the provisions in the Code of Practice for Hong Kong LPG Industry: Module 2 [Underground LPG Pipework] ♦ Apply other gas related regulations and codes of practice ♦ Apply other fire related legislations and codes of practice
7. Assessment Criteria	The integrated outcome requirements of this unit of competency are: (i) Capable to choose suitable locations, models, specifications and number of equipment to be installed in the LPG filling station to be built; and (ii) Capable to design LPG piping system, pneumatic control system and emergency shut-down system for the LPG filling station to be built.	
8. Remarks	The credit value of this unit of competency is set on the presumption that the person already possesses the competency of EMGADE101A【Basic knowledge of gas application】 and EMGAIT201A【Install and test gas supply system and ancillary systems in LPG filling station】.	