

1. Title	Design commercial and industrial gas supply system (service pipes and relevant equipment)
2. Code	EMGADE501A
3. Range	Design suitable gas service pipes and choose relevant equipment correctly for customers in a cost-effective way for commercial and industrial premises to be built or different commercial and industrial application environment according to customers' needs as well as the requirements of the gas safety regulation and codes of practice; take the initiative to accomplish the design task independently and brief the engineering personnel or people concerned on the engineering details; and choose and provide special solutions for non-routine engineering environment.
4. Level	5
5. Credits	4
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Knowledge and principles of designing commercial and industrial gas supply system (service pipes and relevant equipment)</p> <ul style="list-style-type: none"> <li>◆ Understand the engineering processes of industry and commerce and consumption patterns of different trades</li> <li>◆ Draw the pipework drawing</li> <li>◆ Understand the construction plan</li> </ul> <p>6.2 Methods and procedures of designing commercial and industrial gas supply system (service pipes and relevant equipment)</p> <ul style="list-style-type: none"> <li>◆ Select and use suitable equipment e.g. expansion joints, insulated socket, etc.</li> <li>◆ Design the gas piping path</li> <li>◆ Calculate the power and total gas consumption of the commercial and industrial gas appliances and their applied coefficient when using at the same time</li> <li>◆ Calculate correctly to select pipes with suitable diameters</li> <li>◆ Design commercial and industrial Towngas service pipes correctly</li> </ul>

	<p style="text-align: right;">       ◆ Design commercial and industrial LPG service pipes correctly        ◆ Design the pressurized distribution network of the gas supply system     </p> <p>6.3 Professional knowledge and responsibilities for designing commercial and industrial gas supply system (service pipes and relevant equipment)</p> <p style="text-align: right;">       ◆ Apply all the provisions in the Gas Safety (Installation and Use) 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 GU06 on [LPG Installations for Catering Purposes in Commercial Premises]        ◆ Apply other gas related regulations and codes of practice     </p>
7. Assessment Criteria	<p>The integrated outcome requirement of this unit of competency is:</p> <p>(i) Capable to design suitable gas service pipes and choose relevant equipment correctly in a cost-effective way for commercial and industrial application environment.</p>
8. Remarks	<p>The credit value of this unit of competency is set on the presumption that the person already possesses the competency of EMGADE101A <b>【Basic knowledge of gas application】</b> and EMGADE301A <b>【Design domestic gas supply system (service pipes and relevant equipment)】</b> .</p>