

1. Title	Design hot water systems									
2. Code	EMPDDE408A									
3. Range	Master the designs and applications of general hot water systems. This unit of competency is applicable to practitioners engaged in hot water system design, contracting work and repair and maintenance.									
4. Level	4									
5. Credits	3									
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <table border="0"> <tr> <td style="vertical-align: top;">6.1</td> <td style="vertical-align: top;">Understand the operating principles of hot water systems</td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> ◆ Understand the operating principles of various types of gas, LPG and electric water heaters including non-pressure type, pressure type, instantaneous and solar-powered water heaters ◆ Know about the construction and safety equipment of water heaters </td> </tr> <tr> <td style="vertical-align: top;">6.2</td> <td style="vertical-align: top;">Design hot water systems</td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> ◆ Provide appropriate hot water system installations according to the environment and customers' requirements ◆ Consider the design and installation of water supply pipes, use of water source (direct/indirect water supply) and plumbing connection ◆ Select and use pressure release valves/ pressure reducing valves </td> </tr> <tr> <td style="vertical-align: top;">6.3</td> <td style="vertical-align: top;">Professionalism in designing hot water systems</td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> ◆ Design hot water systems and their ancillary systems according to safety guidelines, plumbing ordinance and electricity regulations </td> </tr> </table>	6.1	Understand the operating principles of hot water systems	<ul style="list-style-type: none"> ◆ Understand the operating principles of various types of gas, LPG and electric water heaters including non-pressure type, pressure type, instantaneous and solar-powered water heaters ◆ Know about the construction and safety equipment of water heaters 	6.2	Design hot water systems	<ul style="list-style-type: none"> ◆ Provide appropriate hot water system installations according to the environment and customers' requirements ◆ Consider the design and installation of water supply pipes, use of water source (direct/indirect water supply) and plumbing connection ◆ Select and use pressure release valves/ pressure reducing valves 	6.3	Professionalism in designing hot water systems	<ul style="list-style-type: none"> ◆ Design hot water systems and their ancillary systems according to safety guidelines, plumbing ordinance and electricity regulations
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7. Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are:</p> <p>(i) Capable to design hot water systems and their ancillary systems according to the environment and customers' requirements; and</p> <p>(ii) Capable to list out space and operating requirements for hot water systems and their ancillary systems.</p>									
8. Remarks	The credit value of this unit of competency is set on the presumption that the person already possesses knowledge of water supply and drainage, but not the knowledge of electricity.									