

1. Title	Formulate large-scale plumbing system design specifications and mode of planning
2. Code	EMPDDE503A
3. Range	Formulate large-scale system design specifications and mode of planning for plumbing projects, and draft contract provisions and details for large-scale engineering projects.
4. Level	5
5. Credits	3
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Understand design management of large-scale engineering projects</p> <ul style="list-style-type: none"> ◆ Plan in advance according to design project schedule and expected progress to coordinate various resources including manpower, operating capital, design information and data, etc. ◆ Judge, coordinate, arrange and monitor various design issues, coordinate with client or contractor so that the design project can proceed smoothly ◆ Understand plumbing project design requirements including general specifications, special specifications, relevant international standards, project schedule, working procedure details and implementation timetable, design project price, tender proposals and drawings ◆ Understand tendering procedures for large-scale projects including: <ul style="list-style-type: none"> • Question and answer procedure related to technical provisions and details of the tender • Assess bidder's proposed amendments of technical provisions and details • Come up with the review results on quotations from bidders • Formulate agreements ◆ Understand the design management of large-scale projects, and facilitate, coordinate and monitor the design project to ensure every item of it completes on schedule ◆ Understand the nature and content of all kinds of engineering contract, such as: <ul style="list-style-type: none"> • Equipment procurement contract • Engineering service contract • Engineering design and installation contract

	<p>6.2 Formulate design outline and equipment specification requirements for plumbing installations</p> <ul style="list-style-type: none"> ◆ Integrate design solutions and product specification requirements provided by designers and suppliers ◆ Follow contract requirements to formulate working requirements on design, including: <ul style="list-style-type: none"> • Characteristics and limitations of the workplace • Select materials, with reference to the characteristics and limitations of the workplace, according to the technical requirements ◆ Master all kinds of contract terms, their execution and spirit of the law ◆ Draft and formulate general contract terms and details, including: <ul style="list-style-type: none"> • General contract terms • General technical provisions • Tender form ◆ Draft and formulate special contract terms and details, including: <ul style="list-style-type: none"> • Standard technical provisions • Special contract terms • Special technical provisions • Tender drawing • Tender schedule ◆ Accept the acceptable and achievable requirements and formulate the acceptable/ accepted design outline
<p>7. Assessment Criteria</p>	<p>The integrated outcome requirements of this unit of competency are:</p> <ul style="list-style-type: none"> (i) Capable to master the design management of a large-scale engineering project; and (ii) Capable to formulate design outline and equipment specification requirements for a large-scale plumbing installation.
<p>8. Remarks</p>	<p>This unit of competency is suitable for enhancing the competency of plumbing designers. The credit value of this unit of competency is set on the presumption that the person already possesses basic knowledge of design, installation, and project and operation management.</p>