DPEPP2614: Process Plant Layout and Piping Design

MODULE DETAILS		**Process Plant Layout and Piping Design DPEPP2614** Nominal duration in hours: 36 This time commitment includes the structured activities, preparation reading, and attendance at each webinar, completing exercises, practical assessments, and proctored assessments. It is also expected that students spend additional time on readings, personal study, independent research, and learning, practicing on remote labs and required software and working on any projects and assignments. This module covers process plant layout, process flow diagrams (PFDs), process and instrumentation diagrams (P&IDs), process equipment layout and documentation, as well as piping systems and associated documentation.	
MODULE PURPOSE		The purpose of this module is for the participant to develop general knowledge of the fundamental principles and concepts used in process plant layout and piping design.	
MODIFICATION HISTORY		Rev 4.0	
PREREQUISITE AND/OR CO-REQUISITE MODULES		N/A	
SUMMARY OF LEARNING OUTCOMES		1. Assess the relationship between process plant layout and P&IDs 2. Interpret documentation related to process equipment layout 3. Interpret documentation related to piping systems	
LEARNING OUTCOMES		**ASSESSMENT CRITERIA**	
Learning outcomes specify what students will be able to do as a result of the learning.		Assessment criteria provide the criteria by which achievement of the learning outcomes will be judged.	
1	Assess the relationship between process plant layout and P&IDs	1.1	Outline layout and workflow as elements in the configuration of process plants
		1.2	Interpret processing methods in terms of their process flow diagrams (PFDs)
		1.3	Interpret plant layout designs by employing process and instrumentation diagrams (P&IDs)
2	Interpret documentation related to process equipment layout	2.1	Outline common equipment used in process plants
		2.2	Describe typical plant and piping design documentation and tools
		2.3	Interpret plant layout and plot plans
3.	Interpret documentation related to piping systems	3.1	Explain the fundamental attributes of piping
		3.2	Describe piping system components
		3.3	Interpret benefits and drawbacks in 2D and 3D pipe routing plans for process plants
DELIVERY MODE		Online and/or face-to-face	
SPECIALISED RESOURCES		N/A	

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ASSESSMENT STRATEGY	METHODS OF ASSESSMENT
	Assessors must gather a range of evidence that is valid, sufficient, current, and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, structured assessments, samples, and questioning. This will include short answer questions on the knowledge content, the use of remote and virtual labs, and writing tasks to apply the learning to academic tasks. **CONDITIONS OF ASSESSMENT** **Assessor Requirements:** Assessors must satisfy the assessor requirements in the standards for registered training organisations (RTOs) current at the time of assessment. Assessors must also hold a tertiary qualification in engineering or related field. The RTO must also ensure that assessors are able to demonstrate how they keep their industry knowledge up to date through ongoing professional development. The RTO must take appropriate steps, as an ongoing procedure, to verify information about each assessor's qualifications, vocational competencies, and current industry skills. **Assessment Conditions:** Questioning techniques should not require language, literacy, and numeracy skills beyond those required in this module. The candidate must have access to all tools, equipment, materials, and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals, and reference materials.

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	Assessments may be open book assessment and may be completed off campus. Invigilation software will be used for some assessments to ensure authenticity of work completed. Model answers and marking guide must be provided for all knowledge-based assessments to ensure reliability of assessment judgements when marking is undertaken by different assessors.