

**SKILLS FRAMEWORK FOR ENERGY AND CHEMICALS
SKILLS MAP - PROCESS ENGINEERING MANAGER**

Sector	Energy and Chemicals					
Track	Production and Process Engineering					
Occupation	Manager					
Job Role	Process Engineering Manager					
Job Role Description	<p>The Process Engineering Manager manages the process engineering and process safety engineering teams to ensure optimum technical support for plant facilities. He/She is the sponsor of the organisation's Process Safety Management (PSM) framework and is accountable for ensuring the plant safeguarding system is compliant with process safety standards. He also provides technical input for the review of the organisation's Major Hazard Installation (MHI) Safety Case.</p>					
	<p>The Process Engineering Manager leads in the provision of technical support to the production team for process capability, efficiency, yield and quality improvements. He endorses recommendations for production trial runs, as well as recommendations for changes and improvements to Standard Operating Procedures (SOPs) and work methods for production areas and/or processes. He is accountable for all plant improvement and Management of Change (MOC) projects. In addition, he coaches and mentors junior staff in the process engineering and process safety engineering teams, and manages continuous improvement initiatives for process-related time, cost and quality improvements.</p>					
	<p>The Process Engineering Manager works closely with the process engineering team and Health, Safety and Environment (HSE) department, and liaises with regulatory authorities for process safety matters. He is proficient in engineering project management, and possesses good leadership, people management, decision-making and resource management skills, so as to achieve departmental goals.</p>					
Critical Work Functions and Key Tasks	Critical Work Functions		Key Tasks			
	Administer Workplace Safety and Health (WSH) and Environmental Management Systems (EMS)	Ensure compliance with WSH and EMS systems at the department level		Review process safety incident findings and trends and recommend improvements		
		Administer Process Safety Management (PSM) systems	Approve PSM performance data for reporting		Manage the compliance of plant safeguarding systems with process safety standards	
	Review the organisation's Major Hazard Installation (MHI) Safety Case		Sponsor the PSM framework to meet the organisation's PSM goals			
	Support process plant optimisation		Endorse recommendations for process efficiency improvements		Lead technical support to the production team to improve process capability, efficiency, yield and quality	
			Manage new technology applications for process optimisation		Endorse non-conformance investigation reports	
		Perform process engineering support	Endorse production trial runs for new raw materials introduction and/or new product specifications		Endorse recommendations for changes and improvements to Standard Operating Procedures (SOPs) and work methods for specific production areas and/or processes	
	Manage relevant stakeholders to determine product specifications to meet customers' requirements and standards		Manage all plant improvement projects and Management of Change (MOC) projects during plant operation, commissioning and turnaround			
	Manage process engineering projects		Manage troubleshooting activities arising from new production plant projects		Formulate strategies and action plans to drive process integrity management and recommend improvements	
			Manage asset integrity	Coach and mentor staff		Contribute to business continuity planning, implementation and execution
	Administer staff and organisational development	Drive departmental performance to achieve organisational goals		Drive the adoption of technologies to support virtual collaboration in remote locations		
		Manage continuous improvement initiatives for time, cost and quality improvements		Manage department level resources and budgets		
Skills & Competencies	Technical Skills and Competencies		Generic Skills and Competencies (Top 5)			
	Budget Management	Level 5	Leadership	Advanced		
	Business Continuity Management	Level 5	Developing People	Advanced		
	Change Management	Level 5	Decision Making	Advanced		
	Commissioning and Start-Up Management	Level 5	Communication	Advanced		
	Continuing Professional Development Management	Level 5	Interpersonal Skills	Advanced		
	Continuous Improvement Management	Level 5				
Data Analytics System Design	Level 4					

Skills & Competencies	Engineering Drawing Interpretation and Management	Level 5
	Engineering Management of Change	Level 5
	Engineering Project Management	Level 5
	Engineering Safety Standards Interpretation	Level 5
	Environmental Management System Framework Development and Implementation	Level 4
	Front-End Engineering Design Management	Level 5
	Internet of Things Management	Level 4
	Major Hazard Installation Safety Case Management	Level 6
	Non-Conformance Management	Level 5
	Operations Reporting Protocol Application	Level 5
	Organisational Analysis Management	Level 5
	Organisational Resource Management	Level 5
	Plant Economic Modelling	Level 5
	Process Control	Level 5
	Process Development Management	Level 5
	Process Engineering Design	Level 6
	Process Operations Troubleshooting	Level 5
	Process Optimisation	Level 6
	Process Plant and Equipment Integrity Management	Level 6
	Process Safety Management Framework Development and Implementation	Level 5
	Procurement Management	Level 5
	Robotic and Automation Technology Application	Level 5
	Safety Integrity Levels Management	Level 5
	Staff Development Management	Level 5
Staff Management	Level 5	
Technology Road Mapping	Level 5	
Training, Coaching and Assessment Management	Level 5	
Workplace Safety and Health Framework Development and Implementation	Level 4	
Yield Analysis	Level 5	
Programme Listing	For a list of Training Programmes available for the Energy and Chemicals sector, please visit: www.skillsfuture.sg/skills-framework/energyandchemicals	

The information contained in this document serves as a guide.