

SKILLS FRAMEWORK FOR ENGINEERING SERVICES SKILLS MAP – SENIOR ENGINEER/ASSISTANT MANAGER (ENGINEERING CONSTRUCTION)			
Sector	Engineering Services		
Track	Engineering Construction and Commissioning		
Occupation	Engineering Professional		
Job Role	Senior Engineer/Assistant Manager (Engineering Construction)		
Job Role Description	<p>The Senior Engineer/Assistant Manager (Engineering Construction) leads discipline engineering support to projects on matters related to construction efficiency and installation of equipment, components and systems. He/She optimises project plans, leads constructability reviews, validates installation and assembly, and manages contractors. He leads mechanical completion activities and coordinates with stakeholders to ensure operational excellence and fulfilment of project requirements, while ensuring compliance with external regulations and organisational standards. He specialises in mechanical, electrical, control and instrumentation, civil, structural or geotechnical engineering disciplines. He manages a team of engineers and ensures efficient business operations.</p> <p>He possesses strong analytical, project management and problem-solving skills. He possesses leadership and stakeholder management skills. He works on-site, and is expected to travel occasionally to project locations</p>		
Critical Work Functions and Key Tasks / Performance Expectations	Critical Work Functions	Key Tasks	Performance Expectations* (For legislated / regulated occupations)
			In accordance with: <ul style="list-style-type: none"> • Workplace Safety and Health (WSH) Act; • Building Control Act; • Electricity Act; • Fire Safety Act
	Manage execution of engineering construction projects	Review construction sequence and project plans to ensure alignment with construction strategies and methods	
		Lead discipline engineering support for project scoping, procurement and contractor selection	
		Lead constructability and feasibility reviews for engineering designs	
		Ensure compliance with required work permits and approvals based on regulatory and legislative prerequisites	
Oversee installation of equipment, components and systems	Ensure mitigation of potential conflicts and disputes using relevant organisational approaches		
	Review installation and assembly of equipment, components and systems Evaluate technical deviations from design specifications to warrant change-out or major overhaul of equipment, components and systems		

		Review contractor performance to ensure alignment with organisational standards and practices
		Ensure that engineering construction teams operate in accordance with quality standards and guidelines
		Recommend corrective and preventive measures for equipment faults and failures
	Conduct mechanical completion activities	Ensure resolution of findings from checks and inspections for fulfilment of project requirements
		Validate functional and technical test results to ensure quality and reliability of equipment, components and systems
		Lead demonstration and acceptance of pre-checked systems for hand over to commissioning and operations
		Review compliance with applicable codes, regulations and authority requirements
		Review technical documents for mechanical completion to ensure compliance with organisational procedures
	Manage health, safety and environment	Drive departmental plans to ensure compliance with the organisational Workplace Safety and Health (WSH) policies and Environmental Management Systems (EMS)
		Review contractors' and vendors' compliance with the organisational WSH and EMS standards and practices
		Ensure proper closure of WSH and EMS accident and incident investigations and their notifications to relevant authorities
		Ensure implementation of sustainable engineering procedures and guidelines
	Manage people and organisational function	Acquire and allocate resources to support business operations
		Drive team performance to achieve department goals
		Identify recruitment needs and areas for technical and business management training and development

		Analyse financial implications of business strategies to daily operations		
		Develop risk management plans and risk controls in alignment with organisation's risk management framework		
		Analyse viability of proposed continuous improvement initiatives and drive change management		
Skills & Competencies	Technical Skills & Competencies		Generic Skills & Competencies (Top 5)	
	3D Modelling	Level 4	Communication	Advanced
	Artificial Intelligence Application	Level 4	Teamwork	Advanced
	Budgeting	Level 3	Problem Solving	Intermediate
	Building Information Modelling Application	Level 4	Decision Making	Advanced
	Business Performance Management	Level 3	Interpersonal Skills	Intermediate
	Business Presentation Delivery	Level 4		
	Change Management	Level 4		
	Civil and Structural Engineering Management	Level 4		
	Conflict Resolution	Level 4		
	Continuous Improvement Management	Level 4		
	Cost Management	Level 4		
	Data and Statistical Analytics	Level 3		
	Design for Safety	Level 3		
	Electrical Engineering Management	Level 3		
	Engineering Drawing Interpretation and Management	Level 4		
	Engineering Safety Standards Interpretation	Level 4		
	Environmental Management System Framework Development and Implementation	Level 4		
	Equipment and Systems Testing	Level 4		

Geotechnical Engineering Management	Level 4
Hazards and Risk Identification and Management	Level 4
Installation and Assembly	Level 4
Instrumentation and Control Design Engineering Management	Level 3
Internet of Things Management	Level 4
Inventory Management	Level 4
Learning and Development	Level 3
Manpower Planning	Level 4
Mechanical Engineering Management	Level 3
Organisational Resource Management	Level 4
Organisational Risk Management	Level 3
Programme Management	Level 4
Project Risk Management	Level 4
Quality System Management	Level 3
Robotic and Automation Technology Application	Level 4
Staff Management	Level 4
Stakeholder Management	Level 4
Structural Testing	Level 3
Sustainable Engineering	Level 3
Systems Integration	Level 4
Technical Inspection	Level 3
Technical Writing	Level 3
Technology Application	Level 3
Third Party Management	Level 4
Workplace Safety and Health Culture Development	Level 4
Workplace Safety and Health Framework Development and Implementation	Level 4

Programme Listing	For a list of Training Programmes available for the Engineering Services sector, please visit: www.skillsfuture.sg/skills-framework/engineeringservices
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The information contained in this document serves as a guide.