

SKILLS FRAMEWORK FOR ENGINEERING SERVICES SKILLS MAP – ENGINEER/SUPERVISOR (ENGINEERING CONSTRUCTION)					
Sector	Engineering Services				
Track	Engineering Construction and Commissioning				
Occupation	Engineering Professional				
Job Role	Engineer/Supervisor (Engineering Construction)				
Job Role Description	<p>The Engineer/Supervisor (Engineering Construction) provides discipline engineering support to projects on matters related to construction efficiency and installation of equipment, components and systems. He/She oversees the planning and execution of engineering construction, and ensures adherence to cost, time, quality, and safety targets while maintaining compliance with external regulations and organisational standards. He provides technical support for query resolutions and mechanical completion activities. He specialises in mechanical, electrical, control and instrumentation, civil, structural or geotechnical engineering disciplines. He manages a team of technicians and contributes to the improvement of business operations.</p> <p>He possesses strong problem-solving and interpersonal skills. He possesses planning and supervision skills. He is proactive and takes lead when resolving issues. 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	Manage execution of engineering construction projects	Key Tasks	Performance Expectations* (For legislated / regulated occupations)	
				Develop construction sequence and project plans for engineering construction activities	In accordance with: • Workplace Safety and Health (WSH) Act; • Building Control Act; • Electricity Act; • Fire Safety Act
				Provide discipline engineering support for project scoping, procurement and contractor selection	
				Conduct constructability and feasibility reviews for engineering designs	
				Identify required work permits and approvals based on regulatory and legislative prerequisites	
	Implement organisational approaches to resolve conflicts and disputes				
	Oversee installation of equipment, components and systems	Interpret design drawings to oversee installation and assembly of equipment, components and systems	Determine technical deviations from design specifications during installation and assembly of equipment, components and systems		

		Monitor contractors' performance on engineering construction activities	
		Communicate quality standards and guidelines to engineering construction teams	
		Provide technical support for root cause analyses and troubleshooting of equipment faults and failures	
	Conduct mechanical completion activities	Conduct checks and inspections to validate completion of installations in line with project requirements	
		Witness functional and technical tests on equipment, components and systems	
		Conduct punch list testing to ensure closure of any outstanding works	
		Ensure compliance with applicable codes, regulations and authority requirements	
		Maintain updated technical documents for mechanical completion	
	Manage health, safety and environment	Ensure compliance with the organisational Workplace Safety and Health (WSH) policies and Environmental Management Systems (EMS)	
		Ensure that contractors and vendors comply with the organisational WSH and EMS standards and practices	
		Conduct WSH and EMS accident and incident investigations	
		Implement sustainable engineering procedures and guidelines	
	Manage people and organisational function	Monitor resource availability to support business operations	
		Monitor employee performance by utilising performance management systems	
		Provide inputs on team's recruitment, training and development needs	
		Ensure adherence to planned budgets and financial forecasts	
		Implement risk management plans and risk controls within the team	
		Propose improvements to business processes and operations to drive continuous improvement	
		*Performance Expectations are non-exhaustive and subject to prevailing regulations	

	Technical Skills & Competencies		Generic Skills & Competencies (Top 5)	
		3D Modelling	Level 4	Problem Solving
	Artificial Intelligence Application	Level 3	Communication	Intermediate
	Building Information Modelling Application	Level 3	Teamwork	Advanced
	Business Presentation Delivery	Level 3	Creative Thinking	Basic
	Change Management	Level 3	Interpersonal Skills	Intermediate
Skills & Competencies	Civil and Structural Engineering Management	Level 4		
	Conflict Resolution	Level 4		
	Continuous Improvement Management	Level 3		
	Cost Management	Level 3		
	Data and Statistical Analytics	Level 3		
	Design for Safety	Level 3		
	Electrical Engineering Management	Level 3		
	Engineering Drawing Interpretation and Management	Level 3		
	Engineering Safety Standards Interpretation	Level 3		
	Environmental Management System Framework Development and Implementation	Level 3		
	Equipment and Systems Testing	Level 3		
	Geotechnical Engineering Management	Level 4		
	Hazards and Risk Identification and Management	Level 3		
	Installation and Assembly	Level 3		
	Instrumentation and Control Design Engineering Management	Level 3		
	Internet of Things Management	Level 3		
	Inventory Management	Level 4		
	Learning and Development	Level 2		

	Manpower Planning	Level 3	
	Mechanical Engineering Management	Level 3	
	Organisational Resource Management	Level 4	
	Organisational Risk Management	Level 3	
	Programme Management	Level 3	
	Project Risk Management	Level 3	
	Quality System Management	Level 3	
	Robotic and Automation Technology Application	Level 3	
	Staff Management	Level 3	
	Stakeholder Management	Level 3	
	Structural Testing	Level 3	
	Sustainable Engineering	Level 3	
	Systems Integration	Level 3	
	Technical Inspection	Level 3	
	Technical Writing	Level 3	
	Technology Application	Level 3	
	Third Party Management	Level 3	
	Workplace Safety and Health Culture Development	Level 3	
	Workplace Safety and Health Framework Development and Implementation	Level 3	
Programme Listing	For a list of Training Programmes available for the Engineering Services sector, please visit: www.skillsfuture.sg/skills-framework/engineeringservices		

The information contained in this document serves as a guide.