

SKILLS FRAMEWORK FOR ENGINEERING SERVICES SKILLS MAP – ENGINEER/SUPERVISOR (COMMISSIONING)			
Sector	Engineering Services		
Track	Engineering Construction and Commissioning		
Occupation	Engineering Professional		
Job Role	Engineer/Supervisor (Commissioning)		
Job Role Description	<p>The Engineer/Supervisor (Commissioning) is responsible for overseeing commissioning activities from planning to hand-over and initial start-up. He engages with the project owner to develop owner’s project requirements (OPR) and commissioning plans. He conducts commissioning-focused reviews, inspections, site-visits and tests to validate the quality, safety, and reliability of engineering construction. He conducts pre-start-up safety reviews to ensure smooth handover to project owner. He ensures compliance, risk and safety in accordance with external regulations and organisational standards. He manages a team of technicians and contributes to the improvement of business operations.</p> <p>He possesses strong analytical and problem-solving skills, and interacts effectively with stakeholders. He possesses strong planning and supervision skills, 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	Key Tasks	Performance Expectations* (For legislated / regulated occupations)
			In accordance with: • Workplace Safety and Health (WSH) Act; • Building Control Act; • Electricity Act; • Fire Safety Act
	Conduct commissioning planning	Develop owner's project requirements (OPR) and success criteria for the project	
		Define the commissioning scope, schedule and budget	
		Develop commissioning plans, communication protocols and resourcing plans	
		Ensure communication of commissioning requirements across project teams	
	Commission equipment, systems and assemblies	Develop testing procedures and test data forms including test prerequisites and acceptance criteria	
Conduct review of engineering design submittals to ensure compliance with the OPR			
Conduct periodic commissioning meetings and site visits to ensure accurate engineering construction			

		Oversee handover from construction based on construction checklists
		Execute functional and technical tests to ensure quality and reliability of equipment, systems and assemblies
		Oversee surveys, inspections and tests conducted by vendors and external stakeholders
		Identify commissioning items that do not comply with the OPR and corresponding corrective measures
	Conduct handover and initial start-up	Lead development of commissioning reports documenting all commissioning activities and findings
		Conduct pre-start-up safety review (PSSR) to ensure that all necessary pre-conditions for start-up are in place
		Conduct hand-over of operational equipment, systems and assemblies to approved personnel
		Conduct orientation, demonstration and training for project owners and operations and maintenance personnel
		Provide ongoing commissioning support during initial start-up and ramp-up period
	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	*Performance Expectations are non-exhaustive and subject to prevailing regulations	
		Propose improvements to business processes and operations to drive continuous improvement		
Skills & Competencies	Technical Skills & Competencies		Generic Skills & Competencies (Top 5)	
	Building Information Modelling Application	Level 3	Problem Solving	Intermediate
	Business Presentation Delivery	Level 3	Communication	Intermediate
	Change Management	Level 3	Teamwork	Advanced
	Civil and Structural Engineering Management	Level 4	Interpersonal Skills	Intermediate
	Commissioning and Start-Up Management	Level 3	Service Orientation	Intermediate
	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		
	Instrumentation and Control Design Engineering Management	Level 3		
	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	
	Staff Management	Level 3	
	Stakeholder Management	Level 3	
	Structural Testing	Level 3	
	Sustainable Engineering	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.