

SKILLS FRAMEWORK FOR ENGINEERING SERVICES SKILLS MAP – DESIGNER (ENGINEERING DESIGN)					
Sector	Engineering Services				
Track	Engineering Design				
Occupation	Designer				
Job Role	Designer (Engineering Design)				
Job Role Description	<p>The Designer (Engineering Design) develops technical drawings and models based on pre-defined specifications and engineering calculations. He/She interprets engineering calculations and uses design software and modelling methods for preparation of drawings and designs. He identifies relevant design data and highlights design issues where applicable. He also complies with Design for Safety (DfS) regulations and ensures compliance with industry standards and international conventions.</p> <p>He possesses high detail-orientation and adheres to engineering calculations, regulations and specifications involved in engineering designs. He possesses good analytical, problem-solving and visualisation skills, and is able to multi-task in a fast-paced work environment.</p>				
Critical Work Functions and Key Tasks / Performance Expectations	Critical Work Functions		Key Tasks	Performance Expectations* (For legislated / regulated occupations)	
			Interpret engineering calculations for dimensioning in technical drawings to support product and system designs		
	Create design drawings, schematics and layouts for feasibility, practicability, and completion timeframe				
	Create 3D models based on design specifications				
	Highlight design and engineering gaps in technical drawings and designs				
	Ensure compliance with industry standards and international conventions in drawings and models				
	Develop technical drawings and engineering designs	Employ advanced analytics and big data	Source design data from databases and/or existing designs		Prepare technical and business reports based on data analysis findings
			Conduct research for sustainable design and product innovations		

		Support implementation of sustainable design initiatives		
	Adhere to Design for Safety (DfS) regulations	Propose modifications to design plans to reduce design risks		
		Provide relevant safety information in design, construction and maintenance manuals		
		Maintain DfS records of key decisions made with respect to design risks and modifications		
		*Performance Expectations are non-exhaustive and subject to prevailing regulations		
Skills & Competencies	Technical Skills & Competencies		Generic Skills & Competencies (Top 5)	
	3D Modelling	Level 3	Digital Literacy	Intermediate
	Continuous Improvement Management	Level 2	Teamwork	Advanced
	Data and Statistical Analytics	Level 2	Virtual Collaboration	Intermediate
	Design for Safety	Level 3	Computational Thinking	Basic
	Engineering Drawing and Design Specification	Level 3	Communication	Basic
	Engineering Drawing Interpretation and Management	Level 2		
	Environmental Management System Framework Development and Implementation	Level 2		
	Hazards and Risk Identification and Management	Level 2		
	Programme Management	Level 2		
	Quality System Management	Level 2		
	Sustainable Engineering	Level 3		
	Technical Writing	Level 2		
	Technology Application	Level 2		
	Workplace Safety and Health Framework Development and Implementation	Level 2		
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.