

SKILLS FRAMEWORK FOR ENGINEERING SERVICES SKILLS MAP – JUNIOR DESIGNER (ENGINEERING DESIGN)			
Sector	Engineering Services		
Track	Engineering Design		
Occupation	Designer		
Job Role	Junior Designer (Engineering Design)		
Job Role Description	<p>The Junior Designer (Engineering Design) assists with development of technical drawings and models based on pre-defined specifications and engineering calculations. He/She interprets engineering calculations and uses multiple design software and modelling methods for preparation of drawings and designs. He complies with Design for Safety (DfS) regulations and adheres to industry standards and conventions in technical drawings. He also maintains design databases and documentations.</p> <p>He is meticulous and detail oriented, and is able to adhere precisely to calculations, regulations and specifications involving engineering design. He possesses good analytical and time management 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)
	Develop technical drawings and engineering designs	Interpret engineering calculations to support product and system designs	In accordance with: • Workplace Safety and Health (WSH) Act; • Building Control Act; • Fire Safety Act
		Assist with creation of design drawings, schematics and layouts based on design specifications	
		Assist with creation of 3D models based on design specifications	
		Adopt industry standards and international conventions in drawings and models	
	Employ advanced analytics and big data	Maintain design database and documentation	
		Assist with preparation of technical and business reports based on data analysis findings	
	Implement sustainable design initiatives	Comply with relevant regulations and standards for sustainability in engineering designs	
		Gather data for sustainable design and product innovations	
		Support implementation of sustainable design initiatives	
	Highlight foreseeable design risks during design and planning phase		

	Adhere to Design for Safety (DfS) regulations	Gather relevant safety information for design, construction and maintenance manuals	*Performance Expectations are non-exhaustive and subject to prevailing regulations	
		Record data related to design risks and modifications		
Skills & Competencies	Technical Skills & Competencies		Generic Skills & Competencies (Top 5)	
	3D Modelling	Level 2	Teamwork	Advanced
	Continuous Improvement Management	Level 2	Digital Literacy	Basic
	Data and Statistical Analytics	Level 1	Computational Thinking	Basic
	Design for Safety	Level 3	Communication	Basic
	Engineering Drawing and Design Specification	Level 2	Lifelong Learning	Basic
	Engineering Drawing Interpretation and Management	Level 1		
	Environmental Management System Framework Development and Implementation	Level 1		
	Hazards and Risk Identification and Management	Level 1		
	Programme Management	Level 1		
	Quality Systems Management	Level 2		
	Sustainable Engineering	Level 3		
	Technical Writing	Level 2		
	Technology Application	Level 2		
	Workplace Safety and Health Framework Development and Implementation	Level 1		
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.