

SKILLS FRAMEWORK FOR PRECISION ENGINEERING SKILLS MAP - SENIOR MACHINIST/SENIOR TECHNICIAN				
Sector	Precision Engineering			
Track	Technical and Engineering			
Occupation	Production Technician			
Job Role	Senior Machinist/Senior Technician			
Job Role Description	<p>The Senior Machinist/Senior Technician operates a variety of equipment and/or machines to fabricate components and parts. He/She adapts procedures to troubleshoot and diagnose routine problems, and handles the maintenance of machines. He actively contributes to innovation by suggesting areas of improvement to enhance productivity and efficiency of work processes.</p> <p>He may be required to work on rotating shifts in a factory setting, and under strict compliance to workplace safety and health requirements, organisational quality control and other parameters.</p> <p>He is able to work in a team to achieve production and quality targets, and interact effectively with others to ensure that all issues are resolved appropriately and efficiently.</p>			
Critical Work Functions, Key Tasks and Performance Expectations	Critical Work Functions	Key Tasks	Performance Expectations (For legislated / regulated occupations)	
	Manufacture components and end products	Apply computer-aided design (CAD) to produce assembly, detail and layout drawings	In accordance with: • Workplace Safety and Health (WSH) Act	
		Perform geometric tolerance and inspection		
		Perform non-conventional or specialised tasks for product and/or component manufacturing		
		Set up computer-aided manufacturing (CAM) processes		
		Perform non-destructive testing		
		Perform surface preparation and coating on manufacturing components and products		
	Conform to management system requirements	Apply workshop practices, cleanliness and housekeeping protocols in accordance with standard operating procedures (SOPs)		
		Apply organisational quality systems in manufacturing production tasks		
		Apply standards and SOPs related to manufacturing safety policies and procedures		
	Manage manufacturing process workflow	Contribute to the design of manufacturing processes		
		Contribute to manufacturing process optimisation through technology		
		Maintain and repair manufacturing tools and equipment		
Apply lean techniques to enhance manufacturing operations				
Contribute to continuous improvement	Take initiative to seek opportunities for improvements and implement corrective actions			
	Keep records of defective final products			
Skills & Competencies	Technical Skills and Competencies		Generic Skills and Competencies (Top Level 5)	
	Additive Manufacturing	Level 2	Communication	Basic
	Augmented Reality Application	Level 1	Digital Literacy	Basic
	Automated Operation Monitoring	Level 2	Lifelong Learning	Basic
	Automated System Design	Level 2	Problem Solving	Basic
	Automation System Maintenance	Level 2	Teamwork	Basic
	Cleanliness and Contamination Control	Level 2		
	Computer-aided Design	Level 1		
	Computer-aided Manufacturing	Level 2		
	Continuous Process Improvement	Level 2		
	Cutting	Level 1		
	Data Synthesis	Level 3		
	Embedded System Integration	Level 2		
	Emergency Response Management	Level 2		
	Equipment Maintenance	Level 2		
	Geometric Dimensioning and Tolerancing	Level 3		
	Hydraulic Systems Management	Level 2		
	Internet of Things Management	Level 2		
	Laser and Optics Application	Level 2		
Lean Manufacturing	Level 3			

	Machining	Level 2	
	Manufacturing Process Management	Level 2	
	Material Joining	Level 1	
	Non-destructive Testing	Level 3	
	Plastic Injection Moulding	Level 2	
	Pneumatic Systems Management	Level 2	
	Precision Measurement	Level 2	
	Product and Machine Assembly	Level 2	
	Production Line Set-Up	Level 2	
	Quality System Management	Level 2	
	Surface Preparation and Protection	Level 1	
	Virtual Reality Application	Level 2	
	Welding	Level 1	
	Workplace Safety and Health Practice	Level 3	

Programme Listing	For a list of Training Programmes available for the Precision Engineering sector, please visit: www.skillsfuture.sg/skills-framework/pe		
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