SKILLS FRAMEWORK FOR ELECTRONICS
SKILLS MAP - PRODUCT ENGINEER

Sector	Electronics
Sub-sector	Semiconductor and Data Storage
Track	Technical and Engineering
Occupation	Engineer
Job Role	**Product Engineer**
Job Role Description	The Product Engineer applies engineering principles and techniques to manage product issues in a manufacturing environment to meet organisational objectives. His/Her work also includes evaluating the process efficiency, quality and safety of finished products. He needs to perform test correlation, evaluation, and test characterisation on new products and implement network solutions for product test results tracking. In addition, the Product Engineer leads production and manufacturing systems improvement projects, and is expected to develop test programmes in accordance with organisational objectives. He is also required to ensure compliance with Workplace Safety and Health, and other regulatory requirements in his line. The Product Engineer is required to have strong communication skills to lead a team to meet organisational outcomes. He is expected to guide and mentor the other Engineers under his charges.

Critical Work Functions and Key Tasks

Critical Work Functions	Key Tasks
Administer product engineering	Interface with customer on product-related issues
	Provide assessment and information on test capabilities and provide resolutions to barriers and/or constraints
	Provide required test support needs by production team
	Implement network solutions for product quality improvements
Control product issues	Perform required test correlations, evaluations, and test characterisation on new products
	Implement test programmes, hardware and major set-up issues in mass production
	Review manufacturing process change requests
	Handle test requests, reviews and abnormality report status
Conform to management system requirements	Enforce compliance of safety and good manufacturing practices and processes in production areas
	Monitor process performance data to establish good control parameters
	Conducts technical presentations
Contributes to continuous improvement	Evaluate and recommend process changes for improvements to help improve yield, quality and cycle times
	Lead continuous improvement projects
	Lead working level community to explore opportunities for improvement projects
Influence organisational development	Provide guidance to other engineers
	Develop training programmes for staff

Skills & Competencies

Technical Skills and Competencies		Generic Skills and Competencies (Top 5)	
Audit Management	Level 4	Communication	Intermediate
Data Analytics Systems Design	Level 4	Decision Making	Intermediate
Data Synthesis	Level 4	Leadership	Intermediate
Effectiveness Management	Level 4	Lifelong Learning	Intermediate
Electrostatic Discharge Control	Level 4	Teamwork	Intermediate
Emergency Management	Level 4		
Enterprise Risk Management	Level 3		
Factory Systems Management	Level 4		
Failure Analysis	Level 4		
Good Manufacturing Practices Implementation	Level 4		
Innovation Management	Level 4		
Learning and Development	Level 3		
Manufacturing Process Design	Level 5		
Materials Qualification	Level 5		
Metrology Management	Level 4		
New Product Introduction	Level 4		
Operations Management	Level 4		
Product Testing	Level 4		
Production Resource Management	Level 4		
Quality Systems Management	Level 4		
Solutioning	Level 5		

	Workplace Safety and Health (WSH) Practices Implementation	Level 4	
	Yield Analysis	Level 4	
Programme Listing	For a list of Training Programmes available for the Electronics sector, please visit: www.skillsfuture.sg/skills-framework/electronics		

The information contained in this document serves as a guide.