

SKILLS FRAMEWORK FOR BIOPHARMACEUTICALS MANUFACTURING SKILLS MAP –ENGINEERING AND MAINTENANCE TECHNICIAN		
Sector	Biopharmaceuticals Manufacturing	
Track	Engineering and Maintenance	
Occupation	Technician	
Job Role	Engineering and Maintenance Technician	
Job Role Description	<p>The Engineering and Maintenance Technician supports the Engineering and Maintenance team by carrying out small-scale installations of manufacturing equipment and documenting installations and assembly works performed. He/She provides basic engineering technical support to ensure smooth running of manufacturing processes, including the maintenance of equipment and systems. He is expected to be able to interpret indicators of equipment and system damage and malfunction, and identify possible faults. The Engineering and Maintenance Technician also assists in the upkeep of systems that provide energy and utilities to the manufacturing facility. He must follow Standard Operating Procedures (SOPs) when conducting work and adhere to Health, Safety and Environment (HSE) regulations at all times to protect both employees as well as the quality of the biopharmaceutical products.</p> <p>The Engineering and Maintenance Technician works on a rotating shift in the manufacturing facility to provide continuous technical support. He should have an inquisitive mind and enjoy solving problems. While he should be disciplined and rigorous in following instructions and SOPs, he should also enjoy the interaction and camaraderie of working in a team environment.</p>	
Critical Work Functions and Key Tasks	Critical Work Functions	Key Tasks
	Install equipment and systems	Assist in installations and assembly of equipment and systems under guidance
		Document installations and assembly works
		Move portable manufacturing equipment, machinery and materials
		Connect flexible facilities equipment and parts
	Maintain equipment and systems	Monitor equipment condition
		Assist in the performance of maintenance activities, following Health, Safety and Environment (HSE) and Current Good Manufacturing Practices (CGMPs) procedures
		Support testing of equipment and systems
		Interpret indicators of equipment and system damages and malfunctions
Perform repair works on standard equipment and systems		
Document testing, maintenance and repair works in accordance with organisational procedures		

		Assist in cleaning equipment after performing maintenance and repairs		
		Perform housekeeping of tools after maintenance and repairs		
	Manage energy resources and utilities	Maintain operations of heating, ventilation and air conditioning (HVAC), water for injection, clean steam systems and other CGMP equipment		
		Maintain operations of boilers, compressors, water systems and other plant utility equipment		
	Identify disruptions in the stability of energy resource and utilities supply			
Skills & Competencies			Generic Skills & Competencies (Top 5)	
	Automated Operation Monitoring	Level 2	Communication	Basic
	Cleaning and Sterilising	Level 2	Interpersonal Skills	Basic
	Continuous Improvement	Level 2	Problem Solving	Basic
	Engineering Drawing	Level 1	Service Orientation	Basic
	Equipment and Systems Repair	Level 2	Teamwork	Basic
	Equipment and Systems Testing	Level 2		
	Facility Maintenance	Level 2		
	Flexible Facilities Implementation	Level 2		
	Good Manufacturing Practices Implementation	Level 2		
	Hazards and Risk Identification and Management	Level 2		
	Health, Safety and Environment Procedures Implementation	Level 2		
	Innovation Management	Level 2		
	Installation and Assembly	Level 2		
	Preventive Maintenance	Level 2		
	Systems Thinking	Level 2		
Technical Report Writing	Level 2			
Programme Listing	For a list of Training Programmes available for the Biopharmaceuticals Manufacturing sector, please visit: www.skillsfuture.sg/skills-framework/biopharmmmfg			

The information contained in this document serves as a guide.