

SKILLS FRAMEWORK FOR BIOPHARMACEUTICALS MANUFACTURING SKILLS MAP - ENGINEERING AND MAINTENANCE DIRECTOR		
Sector	Biopharmaceuticals Manufacturing	
Track	Engineering and Maintenance	
Occupation	Director	
Job Role	Engineering and Maintenance Director	
Job Role Description	<p>The Engineering and Maintenance Director is responsible for the overall management of the department and all major decisions regarding the selection, maintenance and repair of equipment and systems in the facility. He/She establishes the strategies for the biopharmaceuticals manufacturing plant to achieve desired efficiency levels from equipment and systems and drives cross-functional collaborations and continuous improvements efforts. He is accountable for meeting the department's operational and financial targets.</p> <p>The Engineering and Maintenance Director champions innovation of equipment and systems within the facility and drives new applications of analytics, technology and automation to enhance the maintenance and management of equipment, systems and energy resources. He retains accountability for risks and regulatory compliance for the department and approves contingency plans in the event of disruptions and emergencies.</p> <p>The Engineering and Maintenance Director should be an inspiring and influential leader, highly skilled in developing capabilities, building strong teams and engaging internal and external stakeholders to drive organisational success. He should have a passion for driving a culture of innovation within and beyond the department to enhance the overall reliability and efficiency of biopharmaceuticals manufacturing operations.</p>	
Critical Work Functions and Key Tasks	Critical Work Functions	Key Tasks
	Manage the department	Establish long-term objectives for the Engineering and Maintenance department in alignment with the strategies of the manufacturing facility
		Deliver reports on engineering and maintenance activities and achievement objectives to senior management
		Establish the operating and resourcing structure for the department to support business objectives
		Manage sourcing and allocation of budgets for the department's activities
		Define the required capabilities for the Engineering and Maintenance department to support business objectives
		Approve workflow improvement solutions and recommendations for the Engineering and Maintenance Department
		Approve recommendations on changes to Engineering and Maintenance department's operations and the required resources

		Negotiate supplier and vendor contracts to secure terms that are in the organisation's best interest		
	Innovate equipment, systems and controls	Spearhead opportunities to automate equipment and systems to maximise efficiency and minimise waste		
		Provide expert guidance on the selection, implementation, operations and maintenance of new technology and automated equipment		
		Drive innovation and performance improvements for equipment and systems		
	Maintain equipment and systems	Transform strategies for the maintenance and repair work by introducing new applications of analytics		
		Facilitate cross-departmental collaboration on maintenance and repair activities to minimise equipment downtime		
	Manage energy resources and utilities	Articulate implications of organisational targets and priorities on energy resource requirements		
		Establish consultative mechanisms to promote the energy-efficiency of manufacturing processes		
	Manage risk and regulatory compliance	Approve the risk management plan for the department		
		Keep abreast of changes to local and international Health, Safety and Environment (HSE) and Quality regulations		
		Collaborate with the Quality and Production departments to ensure overall compliance of manufacturing processes with required Current Good Manufacturing Practices (CGMPs)		
		Collaborate across all departments to ensure engineering and maintenance activities comply with required quality standards		
		Approve business continuity policies, strategies and plans		
		Lead the implementation of business continuity plans in the event of emergencies that affect engineering and maintenance operations		
Skills & Competencies	Technical Skills & Competencies		Generic Skills & Competencies (Top 5)	
	Automated Process Design	Level 6	Communication	Advanced
	Big Data Analysis	Level 5	Decision Making	Advanced
	Budgeting	Level 5	Developing People	Advanced
	Business Continuity Management	Level 5	Interpersonal Skills	Advanced
	Business Networking	Level 5	Leadership	Advanced
	Business Performance Management	Level 5		
	Business Planning	Level 5		
	Change Management	Level 5		
	Conflict Resolution	Level 5		
	Continuous Improvement	Level 5		

	Good Manufacturing Practices Implementation	Level 5	
	Innovation Management	Level 6	
	Maintenance Strategy Development	Level 6	
	Process Optimisation	Level 5	
	Project Management	Level 6	
	Risk Management	Level 5	
	Strategy Development	Level 5	
	Systems Thinking	Level 5	
	Technical Presentation	Level 5	
	Utilities Management	Level 5	
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.