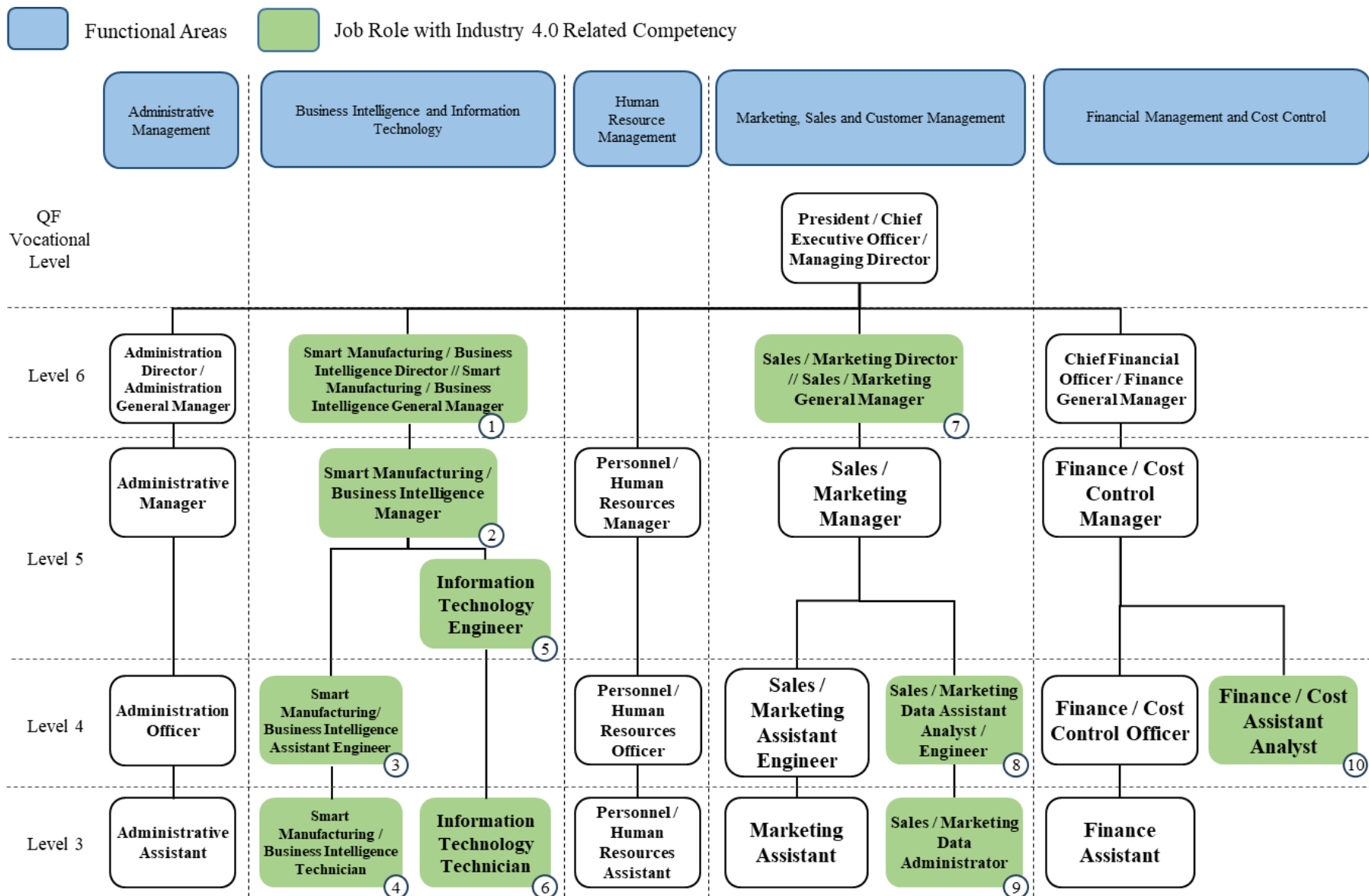


Vocational Qualifications Pathway of Manufacturing Technology (Metal and Plastics) Industry

Remarks

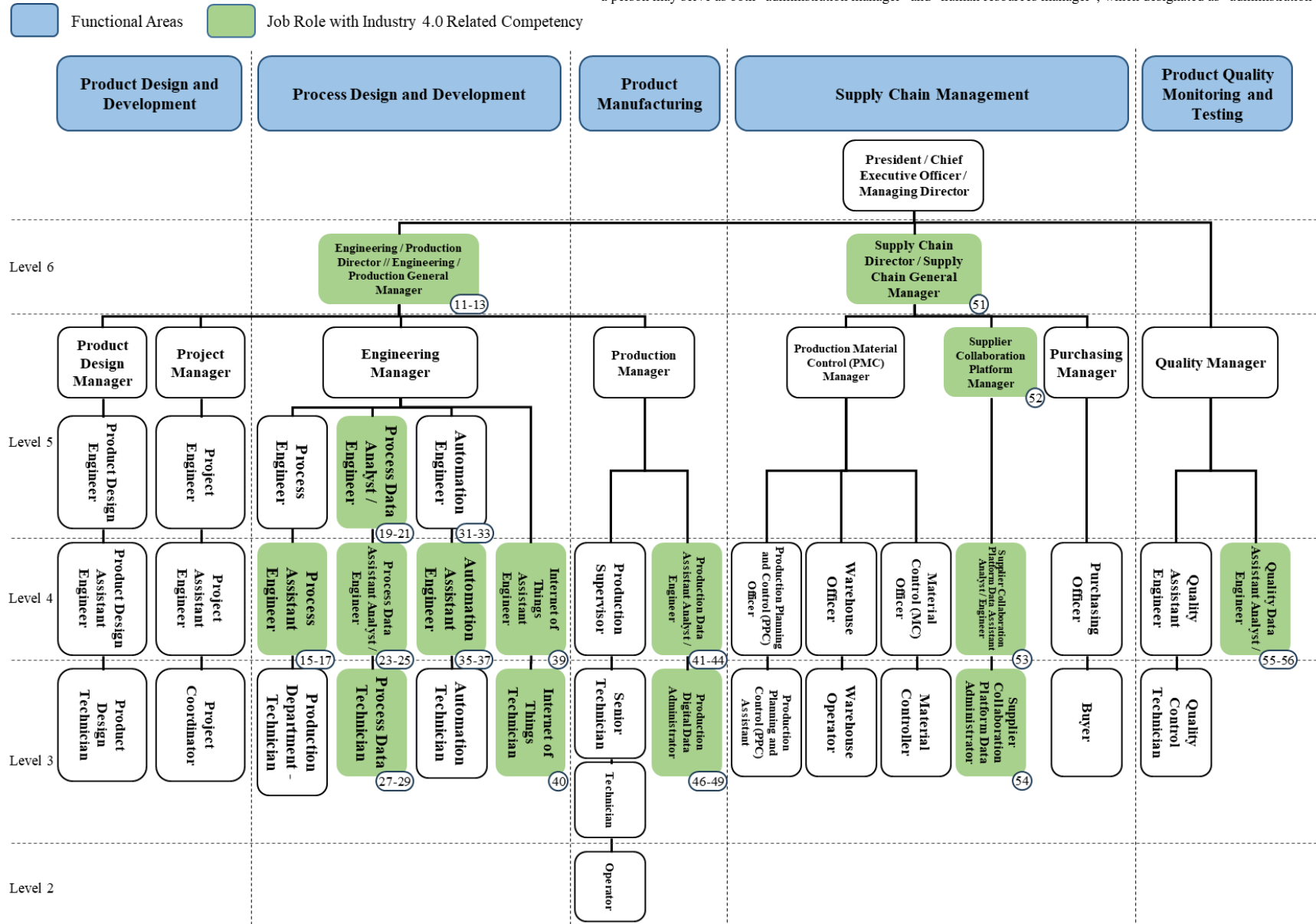
1. The top role in each functional area may be designated “Director” or “General Manager,” depending on an enterprise’s culture and customary practices.
2. Depending on their scale, enterprises may combine the functions of the mentioned positions into integrated roles and retitle posts as needed. For example, a person may serve as both “administration manager” and “human resources manager”, which designated as “administration and human resources manager.”



Vocational Qualifications Pathway of Manufacturing Technology (Metal and Plastics) Industry (Continued)

Remarks

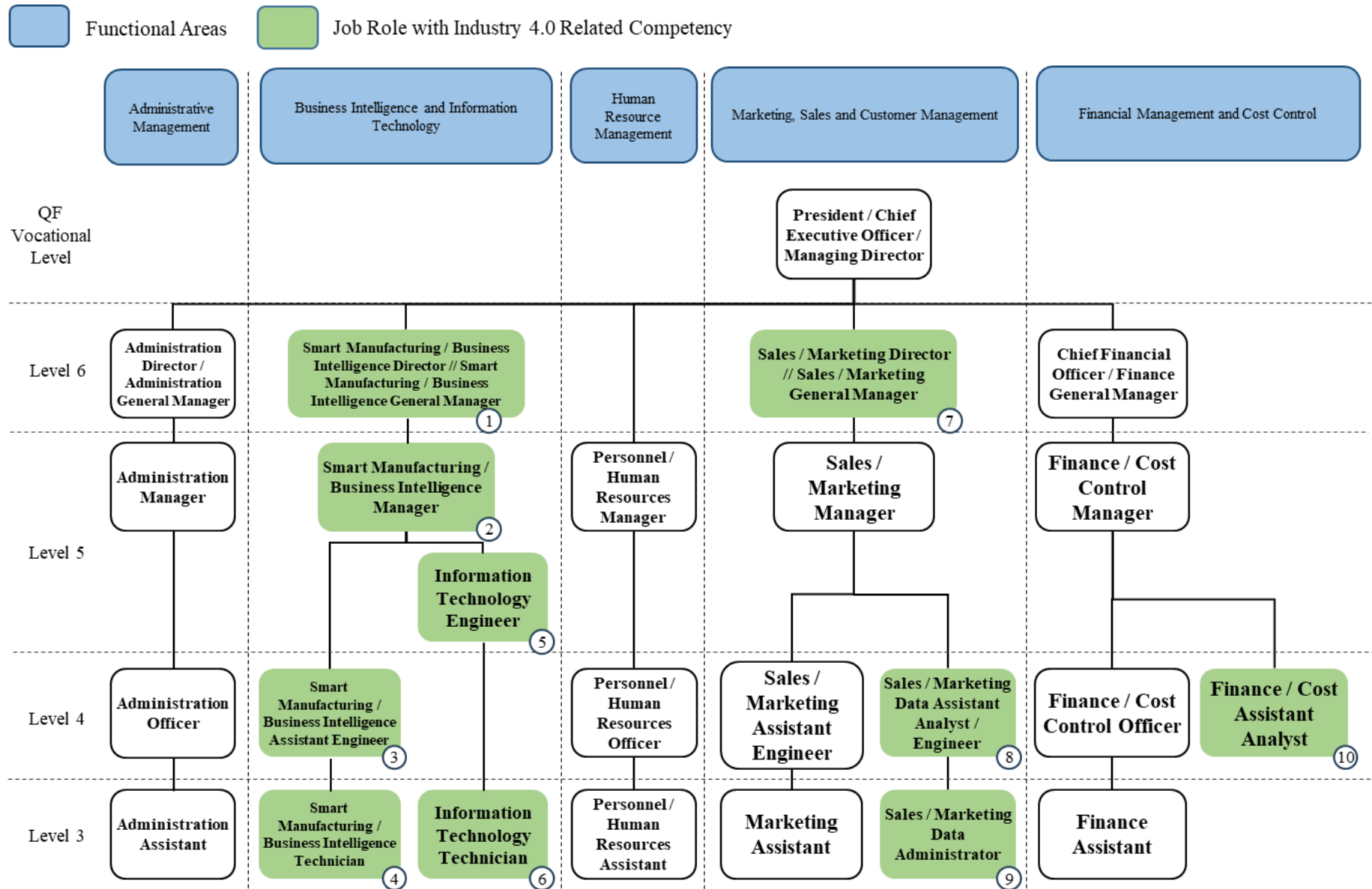
1. The top role in each functional area may be designated “Director” or “General Manager,” depending on an enterprise’s culture and customary practices.
2. Depending on their scale, enterprises may combine the functions of the mentioned positions into integrated roles and retitled posts as needed. For example, a person may serve as both “administration manager” and “human resources manager”, which designated as “administration and human resources manager.”



Vocational Qualifications Pathway of Manufacturing Technology (Tooling) Industry

Remarks

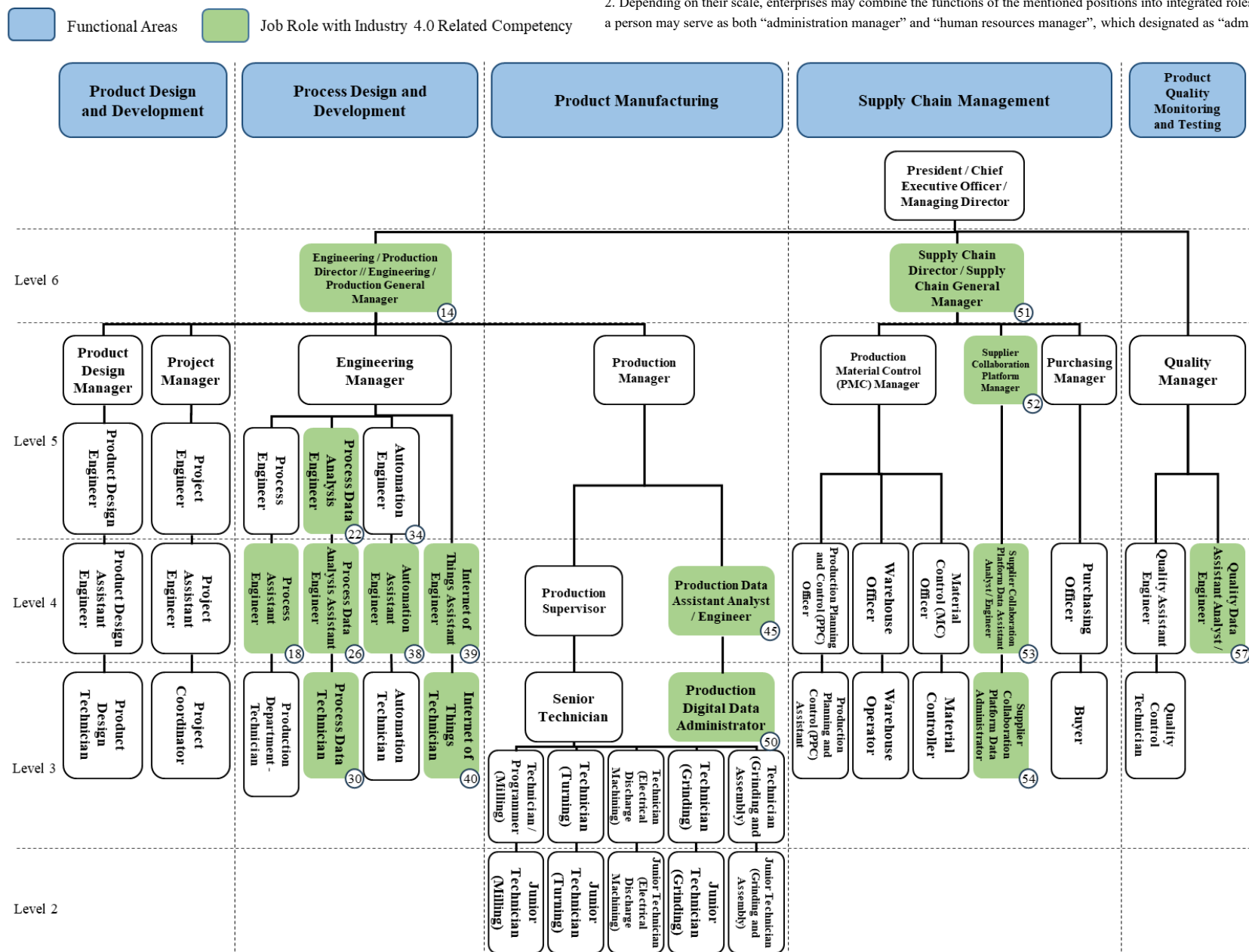
1. The top role in each functional area may be designated “Director” or “General Manager,” depending on an enterprise’s culture and customary practices.
2. Depending on their scale, enterprises may combine the functions of the mentioned positions into integrated roles and retitle posts as needed. For example, a person may serve as both “administration manager” and “human resources manager”, which designated as “administration and human resources manager.”



Vocational Qualifications Pathway of Manufacturing Technology (Tooling) Industry (Continued)

Remarks

1. The top role in each functional area may be designated “Director” or “General Manager,” depending on an enterprise’s culture and customary practices.
2. Depending on their scale, enterprises may combine the functions of the mentioned positions into integrated roles and retitle posts as needed. For example, a person may serve as both “administration manager” and “human resources manager”, which designated as “administration and human resources manager.”



List of Job Roles and Required Units of Competency

Branches	Tooling, Metals and Plastics
Functional Area	Administrative Management

Role

QF
Level

Level 6



Level 5



Level 4



Level 3



Functional Area	Administrative Management				
Job Position	Administration Director / Administration General Manager (Tooling, Metals and Plastics Industry)				
Job Description	Based on enterprise's latest developments, formulate series of forward-looking corporate development and administrative strategies				
Core Competency Level and Credit (for reference)	Level 6 (23 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Examine operational and competitive environment and formulate corporate development strategies	106605L6 Formulate enterprise development strategies, consider cultural conditions of both domestic and international markets and results of competitive analysis, and formulate medium-and long-term development goals and measures for enterprise	6	4
			106597L6 Examine cultural conditions and competitive environment of domestic and foreign markets, and formulate market expansion strategies and target markets	6	6
		Analyse operating environment and data to formulate corporate management strategies and conduct risk management	106607L7 Establish and maintain corporate management systems, comprehensively grasp the industrial development trends as well as future needs for enterprise development in achieving long-term business success and enhancement	7	4
			106601L6 Develop risk management strategies to reduce and avoid risks based on the enterprise's long-term development goals and actual operating conditions	6	4
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Develop environmental and social responsibility strategies and promote related awareness and culture to continuously enhance corporate image	106544L5 Establish and continuously improve enterprise image, to create positive impressions on customers and the public, expand market, and enhance added value and quality of products	5	3
			106545L5 Develop enterprise social responsibility strategies, improve compliance and governance, and cultivate socially conscious enterprise image	5	3
			106546L5 Develop enterprise environmental policies that comply with the standards of the operating regions, Hong Kong, and even international standards, thereby enhance the enterprise's environmental image	5	3
			106559L5 Promote environmental awareness and culture within the enterprise, make environmental protection as core part of enterprise culture, and take responsibility for environmental and social sustainable development	5	3

			106563L5 Develop and implement enterprise social responsibility plan, continuously monitor and improve enterprise social responsibility, and enhance enterprise image	5	3
		Analyse and manage data and information, monitor and optimise daily operations, and establish innovation mechanisms and promote an innovative culture	106549L5 Establish and promote innovative culture, formulate enterprise innovation areas, team directions, and strategies	5	3
			106550L5 Manage daily business operations and appropriately integrate people, machines, and materials to improve operational efficiency	5	4
		Minimum 10 years of functional area relevant experience is recommended Minimum 5 years of administrative manager or equivalent experience is recommended			

Functional Area	Administrative Management				
Job Position	Administration Manager (Tooling, Metals and Plastics Industry)				
Job Description	Manage enterprise's daily operations and formulate related plans and policies in accordance with enterprise's operational and administrative strategies				
Core Competency Level and Credit (for reference)	Level 5 (27 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Develop environmental and social responsibility strategies, promote related awareness and culture to continuously enhance corporate image	106544L5 Establish and continuously improve enterprise image, to create positive impressions on customers and the public, expand market, and enhance added value and quality of products	5	3
			106545L5 Develop enterprise social responsibility strategies, improve compliance and governance, and cultivate socially conscious enterprise image	5	3
			106546L5 Develop enterprise environmental policies that comply with the standards of the operating regions, Hong Kong, and even international standards, thereby enhance the enterprise's environmental image	5	3
			106559L5 Promote environmental awareness and culture within the enterprise, make environmental protection as core part of enterprise culture, and take responsibility for environmental and social sustainable development	5	3
			106563L5 Develop and implement enterprise social responsibility plan, continuously monitor and improve enterprise social responsibility, and enhance enterprise image	5	3
		Analyse, manage data and information, monitor and optimise daily operations, establish innovation mechanisms and promote innovative culture	106549L5 Establish and promote innovative culture, formulate enterprise innovation areas, team directions, and strategies	5	3
			106550L5 Manage daily business operations and appropriately integrate people, machines, and materials to improve operational efficiency	5	4
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Implement workplace occupational safety, health and risk management, and provide general operational legal support and information access suggestions	106452L4 Provide general legal support and related consultation channels for enterprises in Hong Kong and the Mainland of China, ensure compliance with the regulations of both regions, and protect enterprise rights and interests	4	3

			106562L5 Implement workplace risk management to ensure the safety of employees and customers, and reduce operational and financial risks for business	5	3
			106461L4 Conduct occupational safety and health (OSH) risk assessments, assist identify and record potential risks, reduce or eliminate OSH hazards	4	3
		Establish and maintain tool and equipment management system, and Analyse equipment and tool maintenance data	106454L4 Establish and maintain equipment / tool management system, align with enterprise's development needs, and improve production efficiency and stability	4	4
	Minimum 7 years of functional area relevant experience is recommended Minimum 2 years of administrative officer or equivalent experience is recommended				

Functional Area	Administrative Management					
Job Position	Administration Officer (Tooling, Metals and Plastics Industry)					
Job Description	Implement the established plans and policies, arrange and carry out various operational and administrative tasks, and propose improvement suggestions					
Core Competency Level and Credit (for reference)	Level 4 (18 credits)					
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency			
			Code		Level	Credit
	Core Competency	Implement workplace occupational safety, health and risk management, provide general operational legal support and information access suggestions	106452L4 Provide general legal support and related consultation channels for enterprises in Hong Kong and the Mainland of China, ensure compliance with the regulations of both regions, and protect enterprise rights and interests	4	3	
			106562L5 Implement workplace risk management to ensure the safety of employees and customers, and reduce operational and financial risks for business	5	3	
			106461L4 Conduct occupational safety and health (OSH) risk assessments, assist identify and record potential risks, reduce or eliminate OSH hazards	4	3	
		Establish and maintain tool and equipment management system, and analyse equipment and tool maintenance data	106454L4 Establish and maintain equipment / tool management system, align with enterprise's development needs, and improve production efficiency and stability	4	4	
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5	
	Additional Competency	Support the implementation and monitoring of occupational safety, health and environmental protection measures, collect relevant performance data and information	106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2	3	
			106382L3 Perform general human resources work, in accordance with local laws and enterprise regulations, assist in protecting rights and interests of enterprise and its employees	3	3	
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3	
Minimum 6 years of functional area relevant experience is recommended						
Minimum 2 years of administration assistant or equivalent experience is recommended						

Functional Area	Administrative Management				
Job Position	Administration Assistant (Tooling, Metals and Plastics Industry)				
Job Description	Implement daily administrative tasks and coordination in accordance with superior instructions, include application of occupational safety and health regulations and environmental protection measures				
Core Competency Level and Credit (for reference)	Level 3 (9 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Support the implementation and monitoring of occupational safety, health and environmental protection measures, collect relevant performance data and information	106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2	3
			106382L3 Perform general human resources work, in accordance with local laws and enterprise regulations, assist in protecting rights and interests of enterprise and its employees	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
Minimum 5 years of functional area relevant experience is recommended					

Branches

Tooling, Metals and Plastics

Functional Area

Business Intelligence and Information Technology

Role

QF
Level

Level 6

Smart Manufacturing /
Business Intelligence
Director // Smart
Manufacturing /
Business Intelligence
General Manager

Level 5

Smart Manufacturing
/ Business Intelligence
Manager

Level 4

Smart Manufacturing
/ Business Intelligence
Assistant Engineer

Information
Technology Engineer

Level 3

Smart Manufacturing
/ Business Intelligence
Technician

Information
Technology
Technician

Functional Area	Business Intelligence and Information Technology				
Job Position	Smart Manufacturing / Business Intelligence Director // Smart Manufacturing / Business Intelligence General Manager (Tooling, Metals and Plastics Industry)				
Job Description	Plan the implementation strategies of digital transformation and Industry 4.0 for enterprises, enhance their business intelligence (BI) and overall operational efficiency, and plan the overall development, application, and management of enterprise information technology				
Core Competency Level and Credit (for reference)	Level 6 (28 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Drive innovative and original digital transformation strategies to support business growth. Based on enterprise resources and needs, implement horizontal and vertical integration, and lead internal and external integration to develop forward-looking Industry 4.0 strategies	111558L6 Formulate company's "Industry 4.0" development strategy, plan and improve the implementation of innovative digital business models	6	6
			111556L6 Establish "Industry 4.0" architecture to interconnect devices within enterprise, achieve single data source, uncover useful data, and assist enterprise in digital transformation and comprehensive operational improvements	6	6
			111557L6 Analyse application areas of "Industry 4.0", helps enterprise to conduct data-driven and intelligent operations in appropriate areas and continuously improve efficiency	6	5
			111552L5 Implement "Industry 4.0" vertical and horizontal integration and connecting various departments and levels within enterprise to achieve data interconnection and interoperability, comprehensive digital transformation can be realised	5	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Transform enterprise data into knowledge to assist business leaders in making data-driven decisions	111553L5 Implement "Industry 4.0" extended product lifecycle management involves monitor product condition throughout their entire lifecycle, from design, manufacturing, completion, and customer use, to disposal, ultimately optimising the lifecycle and user experience	5	6
			111555L5 Implement "Industry 4.0" digital operations and performance management, establish digital dashboards as needed, develop enterprise digital key performance indicators	5	6
		Design data analysis methods and techniques to help businesses better utilise data and improve decision-making quality. Examine the reliability and usability of data and provide optimisation solutions	111554L5 Establish "Industry 4.0" enterprise database to provide comprehensive, multi-faceted, and real-time operational data for recording and analysis purposes	5	6
			111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis,	4	6

			understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance		
Minimum 10 years of functional area relevant experience is recommended Minimum 5 years of smart manufacturing / business intelligence manager or equivalent experience is recommended					

Functional Area	Business Intelligence and Information Technology				
Job Position	Smart Manufacturing / Business Intelligence Manager (Tooling, Metal & Plastics Industry)				
Job Description	Analyse areas where enterprises can leverage Industry 4.0 to improve operations, plan and manage data collection, analysis, and management methods, and provide improvement recommendations to enterprise leadership based on the analysis results				
Core Competency Level and Credit (for reference)	Level 5 (40 credits)				
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency		
			Code	Level	Credit
		Transform enterprise data into knowledge to assist business leaders in making data-driven decisions	111557L6 Analyse application areas of "Industry 4.0", helps enterprise to conduct data-driven and intelligent operations in appropriate areas and continuously improve efficiency	6	5
			111552L5 Implement "Industry 4.0" vertical and horizontal integration and connecting various departments and levels within enterprise to achieve data interconnection and interoperability, comprehensive digital transformation can be realised	5	6
			111553L5 Implement "Industry 4.0" extended product lifecycle management involves monitor product condition throughout their entire lifecycle, from design, manufacturing, completion, and customer use, to disposal, ultimately optimising the lifecycle and user experience	5	6
			111555L5 Implement "Industry 4.0" digital operations and performance management, establish digital dashboards as needed, develop enterprise digital key performance indicators	5	6
		Design data analysis methods and techniques to help businesses better utilise data and improve decision-making quality. Examine the reliability and usability of data and provide optimisation solutions	111554L5 Establish "Industry 4.0" enterprise database to provide comprehensive, multi-faceted, and real-time operational data for recording and analysis purposes	5	6
			111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Develop digital dashboards to achieve data visualisation. Establish and maintain information technology systems to effectively collect information on production and integration, supply chain, processes, human resources, and markets,	111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
			106547L5	5	6

		and effectively manage various knowledge bases	Establish and maintain enterprise resource planning (ERP) system to collect and analyse data on company's materials, semi-finished products, and finished products, and to monitor, allocate, and optimise resources		
			106551L5 Manage network security to ensure data and information security, smooth network operation, and protection against intrusion	5	4
			106557L5 Establish and maintain human resources information system and knowledge management system to effectively record, analyse, protect enterprise's human resources and intellectual capital of its employees	5	4
			106565L5 Establish and maintain market information management system to monitor real-time market conditions, and adjust and optimise market strategies accordingly	5	3
			Minimum 7 years of functional area relevant experience is recommended Minimum 2 years of smart manufacturing / business intelligence assistant engineer or equivalent experience; or 4 years of information technology engineer or equivalent experience is recommended		

Functional Area	Business Intelligence and Information Technology				
Job Position	Smart Manufacturing / Business Intelligence Assistant Engineer (Tooling, Metal & Plastics Industries)				
Job Description	Mine process data across all operational areas of enterprise using business intelligence (BI) systems, include market, process, production, supply chain, cost, and quality, to conduct industry operational analysis. Analyse existing operational processes using BI systems, thereby improve operational efficiency				
Core Competency Level and Credit (for reference)	Level 4 (22 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Develop and maintain enterprise data infrastructure for business intelligence reporting, analysis, and model building	111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
		Develop digital dashboards to achieve data visualisation	111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
		Collect and integrate relevant data within the enterprise for decision-making, and conduct analysis	111552L5 Implement “Industry 4.0” vertical and horizontal integration and connecting various departments and levels within enterprise to achieve data interconnection and interoperability, comprehensive digital transformation can be realised	5	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Operate intelligent manufacturing / business intelligence platforms to assist in the development of digital dashboards, achieve data visualisation, and optimise operations	111559L3 Apply "Industry 4.0” digital lean principles and use real-time data collected from relevant departments, initially identify wasteful processes or procedures throughout enterprise’s value chain, enable focused operational improvements and lean practices within corresponding departments	4	5
		Monitor the correct data processing at each stage and maintain the data acquisition and management system	111547L3 Implement cybersecurity for Industry 4.0, promote network and information security control measures that simultaneously enable information exchange and ensure information system security in Industry 4.0	3	6
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
	Minimum 6 years of functional area relevant experience is recommended				
	Minimum 2 years of smart manufacturing / business intelligence technician or equivalent experience is recommended				

Functional Area	Business Intelligence and Information Technology					
Job Position	Smart Manufacturing / Business Intelligence Technician (Tooling, Metal & Plastics Industries)					
Job Description	Operate smart manufacturing/business intelligence (BI) platform for system management to ensure the correct collection and input of market, process, production, cost, supply chain, quality, and other data					
Core Competency Level and Credit (for reference)	Level 3 (20 credits)					
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency			
			Code	Level	Credit	
		Operate intelligent manufacturing / business intelligence platforms to assist in the development of digital dashboards, achieve data visualisation, and optimise operations	111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5	
			111559L3 Apply "Industry 4.0" digital lean principles and use real-time data collected from relevant departments, initially identify wasteful processes or procedures throughout enterprise's value chain, enable focused operational improvements and lean practices within corresponding departments	3	6	
			Monitor the correct data processing at each stage and maintain the data acquisition and management system	111547L3 Implement cybersecurity for Industry 4.0, promote network and information security control measures that simultaneously enable information exchange and ensure information system security in Industry 4.0	3	6
				111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
Minimum 5 years of functional area relevant experience is recommended						

Functional Area	Business Intelligence and Information Technology				
Job Position	Information Technology Engineer (Tooling, Metal & Plastics Industry)				
Job Description	Establish and maintain enterprise-wide information systems, promote digital operations, build a comprehensive enterprise operational database, and assist in decision-making				
Core Competency Level and Credit (for reference)	Level 5 (28 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Establish and maintain information technology systems to effectively collect information on production and integration, supply chain, processes, human resources, and markets, and effectively manage various knowledge bases	106547L5 Establish and maintain enterprise resource planning (ERP) system to collect and analyse data on company's materials, semi-finished products, and finished products, and to monitor, allocate, and optimise resources	5	6
			106551L5 Manage network security to ensure data and information security, smooth network operation, and protection against intrusion	5	4
			106557L5 Establish and maintain human resources information system and knowledge management system to effectively record, analyse, protect enterprise's human resources and intellectual capital of its employees	5	4
			106565L5 Establish and maintain market information management system to monitor real-time market conditions, and adjust and optimise market strategies accordingly	5	3
		Store and provide comprehensive operational data across all areas of an enterprise to assist in decision-making	111554L5 Establish "Industry 4.0" enterprise database to provide comprehensive, multi-faceted, and real-time operational data for recording and analysis purposes	5	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Monitor and maintain the normal operation of computer systems	106455L4 Maintain computer system, ensure smooth business operations, and prevent system intrusion	4	4
		Ensure security, the system is equipped with and maintained in accordance with network security and monitoring systems, include their usage and updates, to prevent intrusion and safeguard security	111547L3 Implement cybersecurity for Industry 4.0, promote network and information security control measures that simultaneously enable information exchange and ensure information system security in Industry 4.0	3	6
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3

Minimum 7 years of functional area relevant experience is recommended

	Minimum 4 years of information technology technician or equivalent experience is recommended
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Functional Area	Business Intelligence and Information Technology					
Job Position	Information Technology Technician (Tooling, Metal & Plastics Industry)					
Job Description	Support network security for the maintenance and operation of information systems and computers at all levels of the enterprise					
Core Competency Level and Credit (for reference)	Level 3 (13 credits)					
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency			
			Code		Level	Credit
	Core Competency	Monitor and maintain the normal operation of computer system	106455L4 Maintain computer system, ensure smooth business operations, and prevent system intrusion		4	4
		Ensure security, the system is equipped with and maintained in accordance with network security and monitoring systems, include their usage and updates, to prevent intrusion and safeguard security	111547L3 Implement cybersecurity for Industry 4.0, promote network and information security control measures that simultaneously enable information exchange and ensure information system security in Industry 4.0		3	6
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations		3	3
Minimum 5 years of functional area relevant experience is recommended						

Branches **Tooling, Metals and Plastics Industry**

Functional area **Human Resource Management**

Role

QF
Level

Level 5

**Personnel / Human Resources
Manager**

Level 4

**Personnel / Human Resources
Officer**

Level 3

**Personnel / Human Resources
Assistant**

Functional Area	Human Resource Management				
Job Position	Personnel / Human Resources Manager (Tooling, Metals and Plastics Industry)				
Job Description	Based on national, regional laws and regulations and enterprise's latest developments, formulate a series of human resources and development strategies				
Core Competency Level and Credit (for reference)	Level 5 (21 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Develop corporate intellectual capital and human resource management strategies and compensation and benefits systems	106598L6 Develop intellectual capital development strategy, to develop and train the necessary talent and skills based on the enterprise's objectives	6	4
			106552L5 Develop human resource management strategies, plan recruitment, compensation, training, and reward systems, and build human capital in line with enterprise development	5	4
			106555L5 Establish and maintain employee compensation and benefits systems, closely monitor changes in labor market, and align with enterprise's economic environment and development strategies to retain and attract talent	5	4
		Establish and maintain employee performance management system. Conduct analysis and propose improvement and training strategies	106554L5 Establish and maintain employee performance evaluation system to objectively and fairly assess employee performance from multiple perspectives, serve as basis for promotion, rewards and punishments, and personal development	5	4
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Establish and maintain human resources information systems and knowledge management systems	106557L5 Establish and maintain human resources information system and knowledge management system to effectively record, analyse, protect enterprise's human resources and intellectual capital of its employees	5	4
		Recruit and select employees, establish and implement employee discipline management strategies	106553L5 Formulate and monitor employee discipline and management regulations to meet the needs of business operations and comply with the legal requirements of the operating location	5	4
			106456L4 Recruit and select employees, according to enterprise's operational and development needs, by sourcing and screening suitable candidates through various channels to fill job vacancies	4	4
			106457L4	4	4

			Resolve general labour disputes, safeguard interests of both employers and employees, maintain harmonious working relationship to support smooth business operations		
	Develop, record, and maintain employee skills files for each position, establish and implement training plans	106543L5	Develop and maintain skill files for each position, provide reference materials, assist employees in promotion, transfer, and reward performance	5	4
		106556L5	Plan, organise, and arrange training to adapt to changes in the market and operating environment, thereby enhance enterprise's intellectual capital and human resources	5	4
Minimum 7 years of functional area relevant experience is recommended					
Minimum 2 years of product human resources officer or equivalent experience is recommended					

Functional Area	Human Resource Management											
Job Position	Personnel / Human Resources Officer (Tooling, Metals and Plastics Industry)											
Job Description	Manage skill records and regulations in accordance with the enterprise’s human resources and development strategies, enhance employee capabilities through training, and be responsible for recruitment and selection, as well as handling general labor disputes											
Core Competency Level and Credit (for reference)	Level 4 (25 credits)											
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency									
			Code		Level	Credit						
	Core Competency	Recruit and select employees, and establish and implement employee discipline management strategies	106553L5	Formulate and monitor employee discipline and management regulations to meet the needs of business operations and comply with the legal requirements of the operating location	5	4						
			106456L4				Recruit and select employees, according to enterprise’s operational and development needs, by sourcing and screening suitable candidates through various channels to fill job vacancies	4	4			
			106457L4							Resolve general labour disputes, safeguard interests of both employers and employees, maintain harmonious working relationship to support smooth business operations	4	4
		Develop, record, and maintain employee skills files for each position, and establish and implement training plans	106543L5	Develop and maintain skill files for each position, provide reference materials, assist employees in promotion, transfer, and reward performance	5	4						
			106556L5				Plan, organise, and arrange training to adapt to changes in the market and operating environment, thereby enhance enterprise’s intellectual capital and human resources	5	4			
			111551L4							Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Assist in the implementation and monitoring of general human resources activities, include recruitment, training arrangement for staff at all levels, and performance appraisal execution. Collect and maintain personnel records in both physical and electronic formats, and support in handling labour-related issues	106382L3	Perform general human resources work, in accordance with local laws and enterprise regulations, assist in protecting rights and interests of enterprise and its employees	3	3						
			111548L3				Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3			
	Minimum 6 years of functional area relevant experience is recommended											
Minimum 2 years of personnel / human resources assistant or equivalent experience is recommended												

Functional Area	Human Resource Management				
Job Position	Personnel / Human Resources Assistant (Tooling, Metals and Plastics Industry)				
Job Description	Perform general human resources tasks, include assisting with recruitment, training, performance appraisal, personnel record management, handling labour-related issues, etc				
Core Competency Level and Credit (for reference)	Level 3 (6 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code		Level
	Core Competency	Assist in the implementation and monitoring of general human resources activities, include recruitment, training arrangement for staff at all levels, and performance appraisal execution. Collect and maintain personnel records in both physical and electronic formats, and support in handling labour-related issues	106382L3 Perform general human resources work, in accordance with local laws and enterprise regulations, assist in protecting rights and interests of enterprise and its employees	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
	Minimum 5 years of functional area relevant experience is recommended				

Branches

Tooling, Metals and Plastics Industry

Functional area

Marketing, Sales and Customer Management

Role

**QF
Level**

Level 6

**Sales / Marketing
Director // Sales /
Marketing General
Manager**

Level 5

**Sales / Marketing
Manager**

Level 4

**Sales / Marketing
Assistant Engineer**

**Sales / Marketing
Data Assistant
Analyst / Engineer**

Level 3

Marketing Assistant

**Sales / Marketing
Data Administrator**

Functional Area	Marketing, Sales and Customer Management				
Job Position	Sales / Marketing Director // Sales / Marketing General Manager (Tooling, Metals and Plastics Industry)				
Job Description	Foresight into enterprise's future development, plan market expansion, sales and brand strategies, manage execution and results of these strategies to strengthen enterprise's market, enhance product value-added capabilities				
Core Competency Level and Credit (for reference)	Level 6 (26 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Define the application areas of “Industry 4.0” in marketing, sales, and customer management, and use “Industry 4.0” concept for product lifecycle management	111557L6 Analyse application areas of “Industry 4.0”, helps enterprise to conduct data-driven and intelligent operations in appropriate areas and continuously improve efficiency	6	5
			111553L5 Implement “Industry 4.0” extended product lifecycle management involves monitor product condition throughout their entire lifecycle, from design, manufacturing, completion, and customer use, to disposal, ultimately optimising the lifecycle and user experience	5	6
		Develop market expansion, sales, and customer management strategies; build the brand; anticipate future development; oversee the implementation and improvement of each strategy	106597L6 Examine cultural conditions and competitive environment of domestic and foreign markets, and formulate market expansion strategies and target markets	6	6
			106598L6 Develop intellectual capital development strategy, to develop and train the necessary talent and skills based on the enterprise's objectives	6	4
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Develop strategies for market expansion, brand product sales, and customer relationship management	106564L5 Develop market expansion strategies to enhance brand and product awareness and explore new markets	5	3
			106566L5 Develop enterprise brand strategy, establish and optimise brand and enterprise image	5	3
			106567L5 Develop product sales strategies, adapt to market trends, and set appropriate promotion plans and branding schemes	5	3
			106568L5 Develop customer relationship management strategies to retain existing customers and attract and develop new customers	5	3
		Analyse data and information to develop plans and systems for market expansion, research, information management, and customer relationship management	106464L4 Develop market expansion plans, align with business development, and expand the market	4	3
			106463L4	4	3

			Develop target market research plan, conduct investigations and analysis effectively, manage and monitor market successfully		
			106565L5 Establish and maintain market information management system to monitor real-time market conditions, and adjust and optimise market strategies accordingly	5	3
			106569L5 Establish and maintain customer relationship management system to monitor real time customer relationships and make timely changes to meet customer requirements	5	3
			Minimum 10 years of functional area relevant experience is recommended Minimum 5 years of sales / marketing manager or equivalent experience is recommended		

Functional Area	Marketing, Sales and Customer Management				
Job Position	Sales / Marketing Manager (Tooling, Metals and Plastics Industry)				
Job Description	Based on target market environment and enterprise's latest developments, formulate a series of marketing and sales strategies				
Core Competency Level and Credit (for reference)	Level 5 (29 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Develop strategies for market expansion, brand product sales, and customer relationship management	106564L5 Develop market expansion strategies to enhance brand and product awareness and explore new markets	5	3
			106566L5 Develop enterprise brand strategy, establish and optimise brand and enterprise image	5	3
			106567L5 Develop product sales strategies, adapt to market trends, and set appropriate promotion plans and branding schemes	5	3
			106568L5 Develop customer relationship management strategies to retain existing customers and attract and develop new customers	5	3
		Analyse data and information to develop plans and systems for market expansion, research, information management, and customer relationship management	106464L4 Develop market expansion plans, align with business development, and expand the market	4	3
			106463L4 Develop target market research plan, conduct investigations and analysis effectively, manage and monitor market successfully	4	3
			106565L5 Establish and maintain a market information management system to monitor real-time market conditions, and adjust and optimise market strategies accordingly	5	3
			106569L5 Establish and maintain a customer relationship management system to monitor customer relationships in real time and make timely changes to meet customer requirements	5	3
	Additional Competency	Conduct market research, expansion planning, and customer relationship management	111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
			106462L4 Conduct market research, analyse and forecast market trends, and prepare reports	4	3
			106465L4 Implement market expansion plans, analyse results and provide recommendations, and assist to achieve market expansion goals	4	3
			106466L4	4	3

			Manage customer relationships, effectively handle complaints and issues, maintain long-term good relationships with customers, understand new needs, and enhance business performance		
		Conduct customer and internal communication, coordinate external requirements and internal regulations, meet environmental requirements, analyse internal, external data and information, expand sales and marketing	106491L3 Understand various requirements of physical and electronic drawings, and be familiar with metal product manufacturing processes to effectively communicate with internal staff and customers regarding metal products and processes	3	3
			106487L4 Understand various requirements of physical and electronic drawings, and be familiar with mould manufacturing processes to effectively communicate with internal staff and customers regarding moulds and processes	4	3
			106493L3 Understand various requirements of physical and electronic drawings, and be familiar with plastic product manufacturing processes to effectively communicate with internal staff and customers regarding plastic products and processes	3	3
			106383L4 Apply relevant environmental standards and regulations for products to assess capability of enterprises / suppliers in meeting environmental requirements	4	3
		Analyse external and internal data (include industry research reports, customer relationship management systems (CRM), etc.) to obtain useful intelligence for businesses; analyse and manage the collected market information and data, use data analysis methods to track various sales indicators (include sales revenue, sales volume, etc.), make accurate judgments on sales data	111557L6 Analyse application areas of “Industry 4.0”, helps enterprise to conduct data-driven and intelligent operations in appropriate areas and continuously improve efficiency	4	3
			111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	3	3
			111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	3
	Minimum 7 years of functional area relevant experience is recommended				
	Minimum 2 years of sales / marketing assistant engineer, sales / marketing data assistant analyst / engineer or equivalent experience is recommended				

Functional Area	Marketing, Sales and Customer Management				
Job Position	Sales / Marketing Assistant Engineer (Tooling, Metals and Plastics Industry)				
Job Description	Develop and implement various marketing plans, conduct market research, and manage customer relationship activities				
Core Competency Level and Credit (for reference)	Level 4 (26 credits)				
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency		
			Code	Level	Credit
		Conduct market research, expansion planning, and customer relationship management	106462L4 Conduct market research, analyse and forecast market trends, and prepare reports	4	3
			106465L4 Implement market expansion plans, analyse results and provide recommendations, and assist to achieve market expansion goals	4	3
			106466L4 Manage customer relationships, effectively handle complaints and issues, maintain long-term good relationships with customers, understand new needs, and enhance business performance	4	3
		Carry out customer and internal communication, coordinate external requirements with internal regulations, and comply with environmental protection standards, analyse internal and external data and information to support sales and marketing expansion	106491L3 Understand various requirements of physical and electronic drawings, and be familiar with metal product manufacturing processes to effectively communicate with internal staff and customers regarding metal products and processes	3	3
			106487L4 Understand various requirements of physical and electronic drawings, and be familiar with mould manufacturing processes to effectively communicate with internal staff and customers regarding moulds and processes	4	3
			106493L3 Understand various requirements of physical and electronic drawings, and be familiar with plastic product manufacturing processes to effectively communicate with internal staff and customers regarding plastic products and processes	3	3
			106383L4 Apply relevant environmental standards and regulations for products to assess capability of enterprises / suppliers in meeting environmental requirements	4	3
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Receive, maintain, and develop customer relationships, and collect data to conduct target market research	106371L2 Implement target market research plan, provide data and insights to support development of relevant market strategies	2	3
			106386L3 Expand and maintain customers, strengthen business, and consolidate business	3	4
			106366L1	1	3

		Receive customers and connect with suitable staff to address client requirements		
		111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
Minimum 6 years of functional area relevant experience is recommended				
Minimum 2 years of marketing assistant or equivalent experience is recommended				

Functional Area	Marketing, Sales and Customer Management				
Job Position	Marketing Assistant (Tooling, Metals and Plastics Industry)				
Job Description	Execute target market research plans, collect useful and accurate market information, and carry out customer development and retention activities				
Core Competency Level and Credit (for reference)	Level 3 (13 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Receive, maintain, and develop customer relationships, and collect data to conduct target market research	106371L2 Implement target market research plan, provide data and insights to support development of relevant market strategies	2	3
			106386L3 Expand and maintain customers, strengthen business, and consolidate business	3	4
			106366L1 Receive customers and connect with suitable staff to address client requirements	1	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
			Minimum 5 years of functional area relevant experience is recommended		

Functional Area	Marketing, Sales and Customer Management				
Job Position	Sales / Marketing Data Assistant Analyst / Engineer (Tooling, Metals and Plastics Industry)				
Job Description	Define the market data to be collected, as well as the channels and methods for data collection, analyse various market data to provide quantitative information and support the formulation of marketing and sales strategies				
Core Competency Level and Credit (for reference)	Level 4 (26 credits)				
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency		
			Code	Level	Credit
		Assist the enterprise in timely understanding market trends, identify issues in the sales process, provide recommendations, and adjust sales strategies	106462L4 Conduct market research, analyse and forecast market trends, and prepare reports	4	3
			106487L4 Understand various requirements of physical and electronic drawings, and be familiar with mould manufacturing processes to effectively communicate with internal staff and customers regarding moulds and processes	4	3
			106491L3 Understand various requirements of physical and electronic drawings, and be familiar with metal product manufacturing processes to effectively communicate with internal staff and customers regarding metal products and processes	4	3
			106493L3 Understand various requirements of physical and electronic drawings, and be familiar with plastic product manufacturing processes to effectively communicate with internal staff and customers regarding plastic products and processes	3	3
		Analyse external and internal data (include industry research reports, customer relationship management systems (CRM), etc.) to obtain practical business intelligence, analyse and manage collected market information and data, apply data analysis methods to monitor various sales indicators (such as sales revenue, sales volume, etc.), and make accurate judgments on sales data	111557L6 Analyse application areas of “Industry 4.0”, helps enterprise to conduct data-driven and intelligent operations in appropriate areas and continuously improve efficiency	4	3
			111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	3	3
			111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	3
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
Additional			106462L4 Conduct market research, analyse and forecast market trends, and prepare reports	4	3

		Collect sufficient market and sales data and information to provide insights on market changes	106371L2 Implement target market research plan, provide data and insights to support development of relevant market strategies	2	3
		Clean, integrate, and transform market, sales, and customer data from different sources, and import useful data into the database, prepare various reports based on the defined sales indicators	111547L3 Implement cybersecurity for Industry 4.0, promote network and information security control measures that simultaneously enable information exchange and ensure information system security in Industry 4.0	3	6
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
Minimum 6 years of functional area relevant experience is recommended					
Minimum 2 years of sales / marketing data administrator or equivalent experience is recommended					

Functional Area	Marketing, Sales and Customer Management				
Job Position	Sales / Marketing Data Administrator (Tooling, Metals and Plastics Industry)				
Job Description	Collect target market data, integrate and import it into the database, and prepare reports for easy reference and analysis				
Core Competency Level and Credit (for reference)	Level 3 (20 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Collect sufficient market and sales data and information to provide insights on market changes	106462L4 Conduct market research, analyse and forecast market trends, and prepare reports	4	3
			106371L2 Implement target market research plan, provide data and insights to support development of relevant market strategies	2	3
		Clean, integrate, and transform market, sales, and customer data from different sources, and import useful data into the database, prepare various reports based on the defined sales indicators	111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
			111547L3 Implement cybersecurity for Industry 4.0, promote network and information security control measures that simultaneously enable information exchange and ensure information system security in Industry 4.0	3	6
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
			Minimum 5 years of functional area relevant experience is recommended		

Branches

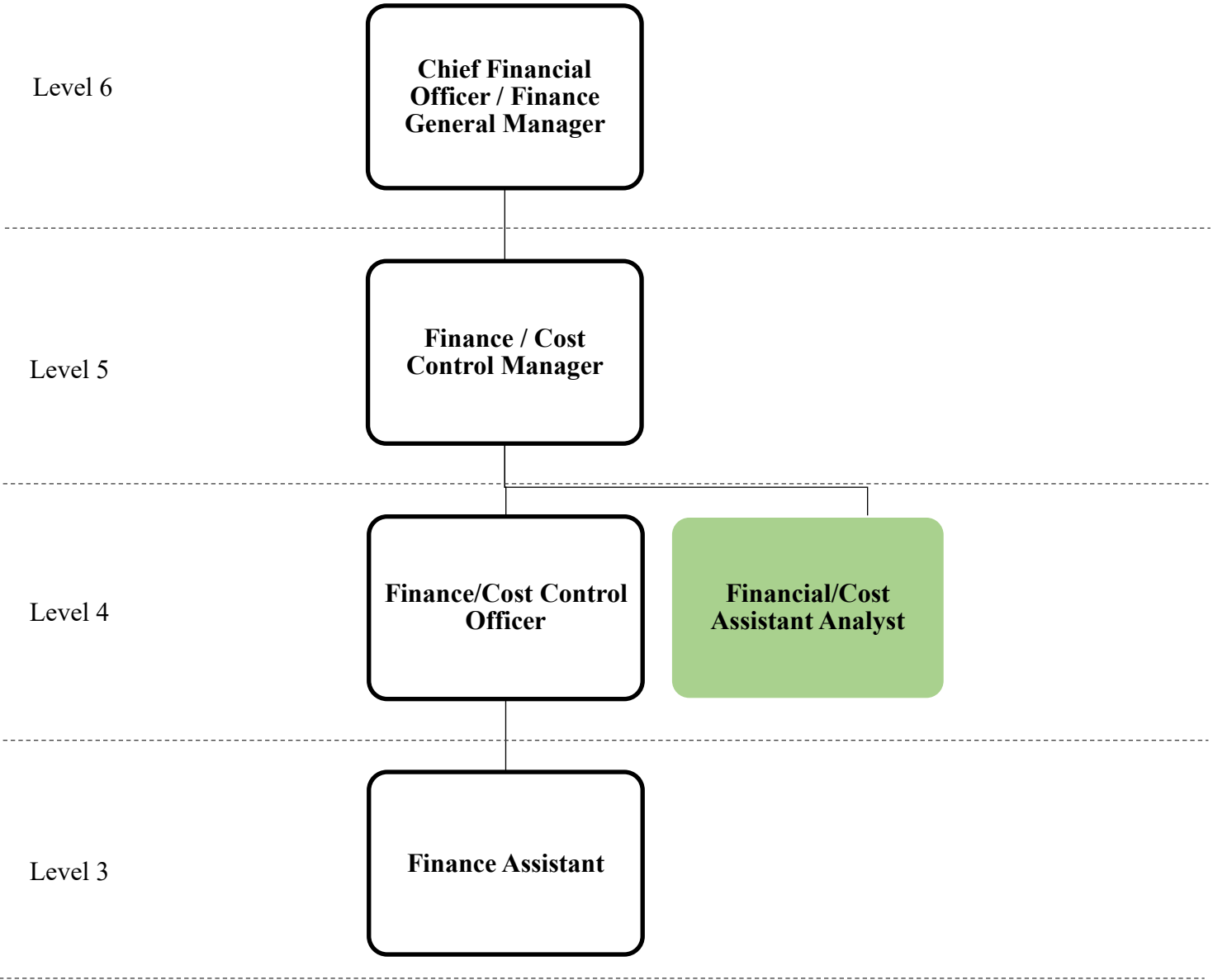
Tooling, Metals and Plastics Industry

Functional area

Financial Management and Cost Control

Role

**QF
Level**



Functional Area	Financial Management and Cost Control				
Job Position	Chief Financial Officer / Finance General Manager (Tooling, Metals and Plastics Industry)				
Job Description	Based on market environment and enterprise’s latest developments, integrate resources and formulate a series of forward-looking financial strategies				
Core Competency Level and Credit (for reference)	Level 6 (17 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Develop corporate finance, finance and resource development strategies and plans	106606L7 Formulate financial and resource development policies and strategies, and prospectively allocate appropriate resources to enable business expansion or sustainability, thereby achieving financial optimisation	7	4
			106599L6 Develop financial management goals, plans, and strategies, align with resource development policies, and conduct financial analysis and strategy adjustments	6	4
			106600L6 Develop enterprise financing plans and equity strategies, analyse risks and management solutions, and make financing and equity recommendations to top management	6	4
		Plan corporate financial and cost data management	111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Conduct financial management, prepare financial and audit reports	106595L5 Conduct financial management and achieve financial management goals, plans, and strategies formulated by enterprise	5	4
			106596L5 Prepare various financial and audit reports for manufacturing industry and assist enterprises in formulate and revise financial strategies	5	4
	Minimum 10 years of functional area relevant experience is recommended				
Minimum 5 years of finance / cost control manager or equivalent experience is recommended					

Functional Area	Financial Management and Cost Control				
Job Position	Finance / Cost Control Manager (Tooling, Metals and Plastics Industry)				
Job Description	Conduct financial management in accordance with enterprise's established financial strategy, prepare enterprise's financial and audit reports				
Core Competency Level and Credit (for reference)	Level 5 (13 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Conduct financial management, prepare financial and audit reports	106595L5 Conduct financial management and achieve financial management goals, plans, and strategies formulated by enterprise	5	4
			106596L5 Prepare various financial and audit reports for manufacturing industry and assist enterprises in formulate and revise financial strategies	5	4
		Import and apply data-driven methods for cost management	111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Conduct financial consolidation, formulate payment and collection strategies, and handle various taxes	106453L4 Provide tax and customs advice, ensure enterprise operates in compliance with tax regulations, and legally reduce the tax burden	4	3
			106540L4 Perform financial accounting tasks, monitor financing environment, and provide information and recommendations to management to optimise financial operations and strategies	4	4
			106542L4 Establish and maintain procedures for various payment and receipt methods, ensure stability of business cash flow and financial health while achieving balanced and timely payments and receipts	4	4
		Conduct cost accounting and implement data-driven solutions to analyse various costs	106541L4 Perform cost accounting tasks and manage cost variances, accurately and timely monitor all operational costs of enterprise	4	4
		By applying data analysis methods, explore enterprise's cost structure, identify wasted areas, implement improvements, safeguard cost and financial data	111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			111559L3 Apply "Industry 4.0" digital lean principles and use real-time data collected from relevant departments, initially identify wasteful processes or procedures throughout enterprise's value chain, enable focused operational improvements and lean practices within corresponding departments	3	6

	Minimum 7 years of functional area relevant experience is recommended Minimum 2 years of finance / cost control supervisor, finance / cost assistant analyst or equivalent experience is recommended
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Functional Area	Financial Management and Cost Control				
Job Position	Finance / Cost Control Officer (Tooling, Metals and Plastics Industry)				
Job Description	Collect useful and accurate financial data within the company, perform various accounting and financial tasks, and provide tax and customs advisory recommendations				
Core Competency Level and Credit (for reference)	Level 4 (20 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Conduct financial consolidation, define payment and collection strategies, and handle various tax-related matters	106453L4 Provide tax and customs advice, ensure enterprise operates in compliance with tax regulations, and legally reduce the tax burden	4	3
			106540L4 Perform financial accounting tasks, monitor financing environment, and provide information and recommendations to management to optimise financial operations and strategies	4	4
			106542L4 Establish and maintain procedures for various payment and receipt methods, ensure stability of business cash flow and financial health while achieving balanced and timely payments and receipts	4	4
		Perform cost accounting and implement digitalisation solutions to analyse various cost items	106541L4 Perform cost accounting tasks and manage cost variances, accurately and timely monitor all operational costs of enterprise	4	4
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Execute payment and bookkeeping processes, understand "Industry 4.0" and carry out digital financial management	106451L3 Arrange payment, receipt transactions and record by double-entry bookkeeping to ensure timely transactions and updated records	3	4
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3

Minimum 6 years of functional area relevant experience is recommended

Minimum 2 years of finance assistant or equivalent experience is recommended

Functional Area	Financial Management and Cost Control					
Job Position	Finance Assistant (Tooling, Metals and Plastics Industry)					
Job Description	Perform daily financial tasks and coordination as instructed by management, and arrange payments and receipts while recording transactions using double-entry bookkeeping					
Core Competency Level and Credit (for reference)	Level 3 (7 credits)					
Main Duties, Units of Competency and Functional Areas			Unit of Competency			
			Code		Level	Credit
	Core Competency	Execute payment and bookkeeping processes, understand "Industry 4.0" and carry out digital financial management	106451L3 Arrange payment, receipt transactions and record by double-entry bookkeeping to ensure timely transactions and updated records		3	4
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations		3	3
			Minimum 5 years of functional area relevant experience is recommended			

Functional Area	Financial Management and Cost Control				
Job Position	Finance / Cost Assistant Analyst (Tooling, Metals and Plastics Industry)				
Job Description	Collect data, analyse company's cost structure based on the data, identify areas of waste for reference by various departments to drive improvements and reduce costs, propose recommendations for adjusting financial strategies based on the analytical results				
Core Competency Level and Credit (for reference)	Level 4 (24 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Assist in financial and cost management, reduce costs and optimise financial operations	106541L4 Perform cost accounting tasks and manage cost variances, accurately and timely monitor all operational costs of enterprise	4	4
			106453L4 Provide tax and customs advice, ensure enterprise operates in compliance with tax regulations, and legally reduce the tax burden	4	3
		Apply data analytical methods to explore the company's cost structure, identify areas of waste, implement improvements, and maintain the security of cost and financial data	111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			111559L3 Apply "Industry 4.0" digital lean principles and use real-time data collected from relevant departments, initially identify wasteful processes or procedures throughout enterprise's value chain, enable focused operational improvements and lean practices within corresponding departments	3	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
			Minimum 6 years of functional area relevant experience is recommended		

Branches

Metal Die Casting, Extrusion and Casting Industry

Functional area

Product Design and Development

Role

QF
Level

Level 6

**Engineering/Production
Director //
Engineering/Production
General Manager**

Level 5

**Product Design
Manager**

Project Manager

**Product Design
Engineer**

Project Engineer

Level 4

**Product Design
Assistant Engineer**

**Process Data
Analyst / Engineer**

Level 3

**Product Design
Technician**

**Project
Coordinator**

Functional Area	Product Design and Development				
Job Position	Engineering / Production Director // Engineering / Production General Manager (Metal Die casting, casting and extrusion Industry)				
Job Description	Strategise to design, process improvement and production techniques of die-casting, casting, and extrusion products, optimise production, drive improvements in product functionality and cost reduction. Anticipate equipment, technologies, and systems required for enterprise future business development. Promote digitalisation in design, processes, and production				
Core Competency Level and Credit (for reference)	Level 6 (64 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Plan for metal die casting, casting, and extrusion product, process, project management, and production technology development strategy, manage and optimise operation, implement automation, improve design and production efficiency	106605L6 Formulate enterprise development strategies, consider cultural conditions of both domestic and international markets and results of competitive analysis, and formulate medium-and long-term development goals and measures for enterprise	6	4
			106601L6 Develop risk management strategies to reduce and avoid risks based on the enterprise's long-term development goals and actual operating conditions	6	4
			106604L6 Establish and maintain quality management system to enhance competitiveness and positive image of enterprise through quality management	6	6
			106603L6 Research, standardise, and plan manufacturing process for die casting and casting products, to ensure all indicators include cost control, environmental protection, product functionality, and appearance etc. to meet the standards	6	5
			106582L6 Manage product development knowledge and continuously improve product design quality and efficiency	6	3
			106548L5 Develop project management strategies to ensure projects are implemented with appropriate resources and completed in timely and effective manner	5	4
			106586L6 Plan and set up automation systems to improve level of automated manufacturing in enterprises	6	5
			106561L5 Continuously improve factory environment and promote factory quality management, optimise occupational health and safety management, and improve production and operational efficiency	5	5
			111556L6 Establish "Industry 4.0" architecture to interconnect devices within enterprise, achieve single data source, uncover useful data, and assist enterprise in digital transformation and comprehensive operational improvements	6	6
		Establish digital data management system based on "Industry 4.0" in product design, process development, and production sector; analyse data application areas, integrate data, improve			

		product design, processes, and production efficiency	111557L6 Analyse application areas of “Industry 4.0”, helps enterprise to conduct data-driven and intelligent operations in appropriate areas and continuously improve efficiency	6	5
			111552L5 Implement “Industry 4.0” vertical and horizontal integration and connecting various departments and levels within enterprise to achieve data interconnection and interoperability, comprehensive digital transformation can be realised	5	6
			106587L5 Manage process design knowledge, standardise it, and continuously improve the process	5	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Plan product design and development, include concepts, environmental protection, life cycle, and intellectual property protection	106560L5 Conduct eco-friendly product design and lifecycle management to continuously reduce environmental impact of products throughout their entire lifecycle, from manufacturing, usage and end-of-life disposal	5	6
			106574L5 Identify constraints on human, machine, and material resources to develop products	5	3
			106581L5 Protect enterprise intellectual property right through conduct various design registrations, maintain confidentiality, and undergo review	5	3
		Establish product design and development system to enable parallel development of individual product components and continuously improve product development efficiency	106575L5 Apply and monitor product data management and engineering change network systems, to enable parallel development and design of different product components	5	4
		Develop project management strategies, assess risks, and promote data-driven project management	106580L5 Conduct risk management for product development projects, formulate effective contingency and emergency response measures	5	3
		Perform factory management, monitor and supervise production equipment to improve product quality, manage workplace risks to improve factory environment, and quantify risk data	106458L5 Implement factory management to improve production efficiency and monitor the timely completion of production plans	5	5
			106460L4 Monitor and supervise operation and maintenance of production equipment, reduce rate of equipment failures, and ensure normal operation of production equipment	4	4
			106562L5 Implement workplace risk management to ensure the safety of employees and customers, and reduce operational and financial risks for business	5	3

Minimum 10 years of functional area relevant experience is recommended

Minimum 5 years of metal die casting, casting and extrusion product design manager, project manager or equivalent experience is recommended

Functional Area	Product Design and Development				
Job Position	Product Design Manager (Metal Die casting, casting and extrusion Industry)				
Job Description	1. Manage product design department according to enterprise requirements for human resources, security, crisis management, knowledge management, and corporate governance etc., continuously improve product design standards and efficiency 2. Lead subordinates to optimise and improve product design, manage the related knowledge				
Core Competency Level and Credit (for reference)	Level 5 (24 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Code
	Core Competency	Plan product design and development, include concepts, environmental protection, life cycle, and intellectual property protection	106560L5 Conduct eco-friendly product design and lifecycle management to continuously reduce environmental impact of products throughout their entire lifecycle, from manufacturing, usage and end-of-life disposal	5	6
			106574L5 Identify constraints on human, machine, and material resources to develop products	5	3
			106581L5 Protect enterprise intellectual property right through conduct various design registrations, maintain confidentiality, and undergo review	5	3
		Establish product design and development system to enable parallel development of individual product components and continuously improve product development efficiency	106575L5 Apply and monitor product data management and engineering change network systems, to enable parallel development and design of different product components	5	4
			106582L6 Manage product development knowledge and continuously improve product design quality and efficiency	6	3
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Product material selection, appearance and functional design	106476L4 Master types, properties, and application areas of commonly used metal materials, composite materials, and other new materials, and select appropriate materials for product development	4	3
			106481L4 Select computer-aided design / manufacturing (CAD / CAM) software to meet enterprise's actual application needs	4	3
		Perform computer-aided engineering analysis and simulation of product processing	106576L5 Conduct computer-simulated product functional testing to improve product engineering and functional design, shorten product engineering development time, and enhance manufacturing feasibility	5	4

			106577L5 Perform computer-aided engineering (CAE) analysis of the machining process and mould design to improve mould design, thereby increasing process efficiency and reducing product defects	5	4
		Create product concept creation and manage design modification requirements	106485L5 Create product concepts and manage design changes to ensure engineering designs meet the latest requirements	5	6
Minimum 8 years of functional area relevant experience is recommended					
Minimum 2 years of metal die casting, casting and extrusion product design engineer or equivalent experience is recommended					

Functional Area	Product Design and Development				
Job Position	Product Design Engineer (Metal Die casting, casting and extrusion Industry)				
Job Description	1. Based on customer requirements, and in accordance with production, assembly, and surface finishing requirements, design die-cast, cast and extruded parts, and lead engineers and technicians to design metal products, produce rapid prototypes and samples 2. Proficient in computer-aided engineering (CAE) analysis and computer simulation product functional testing software to optimise product design				
Core Competency Level and Credit (for reference)	Level 5 (25 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Code
	Core Competency	Product material selection, appearance and functional design	106476L4 Master types, properties, and application areas of commonly used metal materials, composite materials, and other new materials, and select appropriate materials for product development	4	3
			106481L4 Select computer-aided design / manufacturing (CAD / CAM) software to meet enterprise's actual application needs	4	3
		Perform computer-aided engineering analysis and simulation of product processing	106576L5 Conduct computer-simulated product functional testing to improve product engineering and functional design, shorten product engineering development time, and enhance manufacturing feasibility	5	4
			106577L5 Perform computer-aided engineering (CAE) analysis of the machining process and mould design to improve mould design, thereby increasing process efficiency and reducing product defects	5	4
		Manage product design changes, continuously analyse and optimise	106485L5 Create product concepts and manage design changes to ensure engineering designs meet the latest requirements	5	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Perform product engineering design and digitise design data	106473L4 Develop and manufacture rapid moulds for metal products, and meet the requirements of small-batch, multi-variety metal product development and production	4	3
			106475L4 Produce complete and clear drawings of metal die casting and casting parts, and ensure other departments such as mould design, production, assembly, and surface finishing can easily understand and coordinate the processing	4	4
		Perform product concept, appearance and function design	106480L4 Prepare product manuals, ensure accuracy and correctness of content and data, and meet customer requirements	4	3

			106482L4 Operate computer-aided industrial design (CAID) systems, conduct product appearance simulation and data analysis	4	4
Minimum 7 years of functional area relevant experience is recommended Minimum 2 years of metal die casting, casting and extrusion product design assistant engineer or equivalent experience is recommended					

Functional Area	Product Design and Development				
Job Position	Product Design Assistant Engineer (Metal Die casting, casting and extrusion Industry)				
Job Description	1. Design various metal products and prepare product manuals 2. Proficiently operate various computer-aided design / manufacturing (CAD / CAM) systems to perform computer-aided drafting, design, and simulation				
Core Competency Level and Credit (for reference)	Level 4 (25 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Perform product engineering design and digitise design data	106473L4 Develop and manufacture rapid moulds for metal products, and meet the requirements of small-batch, multi-variety metal product development and production	4	3
			106475L4 Produce complete and clear drawings of metal die casting and casting parts, and ensure other departments such as mould design, production, assembly, and surface finishing can easily understand and coordinate the processing	4	4
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Perform product concept, appearance, and functional design	106480L4 Prepare product manuals, ensure accuracy and correctness of content and data, and meet customer requirements	4	3
			106482L4 Operate computer-aided industrial design (CAID) systems, conduct product appearance simulation and data analysis	4	4
			106485L5 Create product concepts and manage design changes to ensure engineering designs meet the latest requirements	5	6
	Additional Competency	Perform product and component geometric and industrial design, and record and process design data	106390L3 Perform product drafting and define geometric dimensions and tolerances to facilitate internal and customer communication regarding product, tooling, and component specifications	3	3
			106391L3 Perform detailed 2D computer-generated graphics, 3D surface and solid modelling and parametric design, provide computer-generated surface and solid models, execute design modifications for complex-shaped products, product and mould manufacturing programming	3	4
			106387L3 Perform 2D and 3D simulation and reverse engineering of metal products, provide computer models, execute product design modifications and product and mould manufacturing programming	3	3

			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
	Produce product prototypes		106388L3 Perform surface and heat treatment on metal product samples, providing samples that meet physical, functional, and surface quality requirements for customer and internal reference	3	3
			106392L3 Utilise rapid prototyping technology to create prototypes, quickly providing them to customers and internal staff for discussions on product design appearance and manufacturing feasibility	3	4
			106393L3 Arrange sample testing according to testing requirements to help ensure product meets required functional requirements before mass production, and use it as reference for design modifications if necessary	3	3
		Minimum 6 years of functional area relevant experience is recommended Minimum 2 years of metal die casting, casting and extrusion product design technician or equivalent experience is recommended			

Functional Area	Product Design and Development				
Job Position	Product Design Technician (Metal Die casting, casting and extrusion Industry)				
Job Description	Draw drawings as required, and perform 2D computer-aided drafting, 3D surface and solid modeling, as well as parametric design				
Core Competency Level and Credit (for reference)	Level 3 (23 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Perform product and component geometric and industrial design, and record and process design data	106390L3 Perform product drafting and define geometric dimensions and tolerances to facilitate internal and customer communication regarding product, tooling, and component specifications	3	3
			106391L3 Perform detailed 2D computer-generated graphics, 3D surface and solid modelling and parametric design, provide computer-generated surface and solid models, execute design modifications for complex-shaped products, product and mould manufacturing programming	3	4
			106387L3 Perform 2D and 3D simulation and reverse engineering of metal products, provide computer models, execute product design modifications and product and mould manufacturing programming	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
			Produce product prototypes	106392L3 Utilise rapid prototyping technology to create prototypes, quickly providing them to customers and internal staff for discussions on product design appearance and manufacturing feasibility	3
		106393L3 Arrange sample testing according to testing requirements to help ensure product meets required functional requirements before mass production, and use it as reference for design modifications if necessary		3	3
		106388L3 Perform surface and heat treatment on metal product samples, providing samples that meet physical, functional, and surface quality requirements for customer and internal reference		3	3
		Minimum 5 years of functional area relevant experience is recommended			

Functional Area	Product Design and Development				
Job Position	Project Manager (Metal Die casting, casting and extrusion Industry)				
Job Description	Develop project management strategies, manage project team, project risk, development and manufacturing cost				
Core Competency Level and Credit (for reference)	Level 5 (12 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Develop project management strategies, assess risks, and promote data-driven project management	106548L5 Develop project management strategies to ensure projects are implemented with appropriate resources and completed in timely and effective manner	5	4
			106580L5 Conduct risk management for product development projects, formulate effective contingency and emergency response measures	5	3
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Assemble product development project team with necessary knowledge to comprehensively manage the project and promote data-driven approach to project management	106579L5 Assemble product development project team, combine suitable internal and external human, machine, and material resources to effectively and quickly carry out the project	5	3
			106578L5 Conduct comprehensive management of product development projects, monitor and optimise project schedule, risks, scope, costs, and engineering changes	5	3
	Minimum 8 years of functional area relevant experience is recommended				
	Minimum 2 years of metal die casting, casting and extrusion project engineer or equivalent experience is recommended				

Functional Area	Product Design and Development				
Job Position	Project Engineer (Metal Die casting, casting and extrusion Industry)				
Job Description	Assemble product development project team, estimate and control product development and manufacturing costs				
Core Competency Level and Credit (for reference)	Level 5 (11 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Assemble product development project team with necessary knowledge to comprehensively manage the project and promote data-driven approach to project management	106579L5 Assemble product development project team, combine suitable internal and external human, machine, and material resources to effectively and quickly carry out the project	5	3
			106578L5 Conduct comprehensive management of product development projects, monitor and optimise project schedule, risks, scope, costs, and engineering changes	5	3
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Establish product development project milestones and control project execution time	106484L4 Plan and control product development project schedules, ensure R&D projects are completed within controllable resources and timeframes	4	3
			106483L4 Coordinate manufacturing process of product prototypes, enhance prototype quality and efficiency in enterprises	4	3
		Estimate and control product development and manufacturing costs, collect and analyse cost data	106486L4 Estimate and control product development and manufacturing costs, provide reliable information to set reasonable and competitive quotes, and ensure project profitability	4	4
Minimum 7 years of functional area relevant experience is recommended					
Minimum 2 years of metal die casting, casting and extrusion project assistant engineer or equivalent experience is recommended					

Functional Area	Product Design and Development				
Job Position	Project Assistant Engineer (Metal Die casting, casting and extrusion Industry)				
Job Description	Monitor the overall project progress, and coordinate prototype manufacturing				
Core Competency Level and Credit (for reference)	Level 4 (15 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code		Level
	Core Competency	Develop product development project milestones and control project execution timelines	106484L4 Plan and control product development project schedules, ensure R&D projects are completed within controllable resources and timeframes	4	3
			106483L4 Coordinate manufacturing process of product prototypes, enhance prototype quality and efficiency in enterprises	4	3
		Estimate and control product development and manufacturing costs, and collect and analyse cost data	106486L4 Estimate and control product development and manufacturing costs, provide reliable information to set reasonable and competitive quotes, and ensure project profitability	4	4
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Organise and follow up on project progress, collect relevant information, and conduct real-time data recording	106394L3 Organise project progress and related documents to ensure accuracy of information reported to superiors	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
		Understand mould, metal product, and plastic product manufacturing processes, and communicate with clients and internal teams	106487L4 Understand various requirements of physical and electronic drawings, and be familiar with mould manufacturing processes to effectively communicate with internal staff and customers regarding moulds and processes	4	3
			106491L3 Understand various requirements of physical and electronic drawings, and be familiar with metal product manufacturing processes to effectively communicate with internal staff and customers regarding metal products and processes	3	3
			106493L3 Understand various requirements of physical and electronic drawings, and be familiar with plastic product manufacturing processes to effectively communicate with internal staff and customers regarding plastic products and processes	3	3

Minimum 6 years of functional area relevant experience is recommended

Minimum 2 years of metal die casting, casting and extrusion project coordinator or equivalent experience is recommended

Functional Area	Product Design and Development				
Job Position	Project Coordinator (Metal Die casting, casting and extrusion Industry)				
Job Description	Organise project progress data, assist in developing product development project schedules				
Core Competency Level and Credit (for reference)	Level 3 (15 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Organise and follow up on project progress, collect relevant information, and conduct real-time data recording	106394L3 Organise project progress and related documents to ensure accuracy of information reported to superiors	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
		Understand mould, metal product, and plastic product manufacturing processes, and communicate with clients and internal teams	106487L4 Understand various requirements of physical and electronic drawings, and be familiar with mould manufacturing processes to effectively communicate with internal staff and customers regarding moulds and processes	4	3
			106491L3 Understand various requirements of physical and electronic drawings, and be familiar with metal product manufacturing processes to effectively communicate with internal staff and customers regarding metal products and processes	3	3
			106493L3 Understand various requirements of physical and electronic drawings, and be familiar with plastic product manufacturing processes to effectively communicate with internal staff and customers regarding plastic products and processes	3	3
			Minimum 5 years of functional area relevant experience is recommended		

Branches

Metal Stamping and Sheet Metal Industry

Functional area

Product Design and Development

Role

QF
Level

Level 6

**Engineering/Production
Director //
Engineering/Production
General Manager**

Level 5

**Product Design
Manager**

Project Manager

**Product Design
Engineer**

Project Engineer

Level 4

**Product Design
Assistant Engineer**

**Project Assistant
Engineer**

Level 3

**Product Design
Technician**

**Project
Coordinator**

Functional Area	Product Design and Development				
Job Position	Engineering / Production Director // Engineering / Production General Manager (Metal Stamping and Sheet Metal Industry)				
Job Description	Strategise to design, process improvement and production techniques of stamping and sheet metal products, optimise production, drive improvements in product functionality and cost reduction. Anticipate equipment, technologies, and systems required for enterprise future business development. Promote digitalisation in design, processes, and production				
Core Competency Level and Credit (for reference)	Level 6 (65 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Plan for metal stamping and sheet metal product, process, project management, and production technology development strategy, manage and optimise operation, implement automation, improve design and production efficiency	106605L6 Formulate enterprise development strategies, consider cultural conditions of both domestic and international markets and results of competitive analysis, and formulate medium-and long-term development goals and measures for enterprise	6	4
			106601L6 Develop risk management strategies to reduce and avoid risks based on the enterprise's long-term development goals and actual operating conditions	6	4
			106604L6 Establish and maintain quality management system to enhance competitiveness and positive image of enterprise through quality management	6	6
			106602L5 Design and plan manufacturing process for metal stamping products to ensure the standards are met in terms of cost control, environmental protection, product functionality, and appearance	5	6
			106582L6 Manage product development knowledge and continuously improve product design quality and efficiency	6	3
			106548L5 Develop project management strategies to ensure projects are implemented with appropriate resources and completed in timely and effective manner	5	4
			106586L6 Plan and set up automation systems to improve level of automated manufacturing in enterprises	6	5
			106561L5 Continuously improve factory environment and promote factory quality management, optimise occupational health and safety management, and improve production and operational efficiency	5	5
			111556L6 Establish "Industry 4.0" architecture to interconnect devices within enterprise, achieve single data source, uncover useful data, and assist enterprise in digital transformation and comprehensive operational improvements	6	6
		Establish digital data management system based on "Industry 4.0" in product design, process development, and production sector; analyse data application areas, integrate data, improve			

		product design, processes, and production efficiency	111557L6 Analyse application areas of “Industry 4.0”, helps enterprise to conduct data-driven and intelligent operations in appropriate areas and continuously improve efficiency	6	5
			111552L5 Implement “Industry 4.0” vertical and horizontal integration and connecting various departments and levels within enterprise to achieve data interconnection and interoperability, comprehensive digital transformation can be realised	5	6
			106587L5 Manage process design knowledge, standardise it, and continuously improve the process	5	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Plan product design and development, include concepts, environmental protection, life cycle, and intellectual property protection	106560L5 Conduct eco-friendly product design and lifecycle management to continuously reduce environmental impact of products throughout their entire lifecycle, from manufacturing, usage and end-of-life disposal	5	6
			106574L5 Identify constraints on human, machine, and material resources to develop products	5	3
			106581L5 Protect enterprise intellectual property right through conduct various design registrations, maintain confidentiality, and undergo review	5	3
		Establish product design and development system to enable parallel development of individual product components and continuously improve product development efficiency	106575L5 Apply and monitor product data management and engineering change network systems, to enable parallel development and design of different product components	5	4
		Develop project management strategies, assess risks, and promote data-driven project management	106580L5 Conduct risk management for product development projects, formulate effective contingency and emergency response measures	5	3
		Perform factory management, monitor and supervise production equipment to improve product quality, manage workplace risks to improve factory environment, and quantify risk data	106458L5 Implement factory management to improve production efficiency and monitor the timely completion of production plans	5	5
			106460L4 Monitor and supervise operation and maintenance of production equipment, reduce rate of equipment failures, and ensure normal operation of production equipment	4	4
			106562L5 Implement workplace risk management to ensure the safety of employees and customers, and reduce operational and financial risks for business	5	3

Minimum 10 years of functional area relevant experience is recommended

Minimum 5 years of metal stamping and sheet metal product design manager, project manager or equivalent experience is recommended

Functional Area	Product Design and Development				
Job Position	Product Design Manager (Metal Stamping and Sheet Metal Industry)				
Job Description	1. Manage product design department according to enterprise requirements for human resources, security, crisis management, knowledge management, and corporate governance etc., continuously improve product design standards and efficiency 2. Lead subordinates to optimise and improve product design, manage the related knowledge				
Core Competency Level and Credit (for reference)	Level 5 (24 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Code
	Core Competency	Plan product design and development, include concepts, environmental protection, life cycle, and intellectual property protection	106560L5 Conduct eco-friendly product design and lifecycle management to continuously reduce environmental impact of products throughout their entire lifecycle, from manufacturing, usage and end-of-life disposal	5	6
			106574L5 Identify constraints on human, machine, and material resources to develop products	5	3
			106581L5 Protect enterprise intellectual property right through conduct various design registrations, maintain confidentiality, and undergo review	5	3
		Establish product design and development system to enable parallel development of individual product components and continuously improve product development efficiency	106575L5 Apply and monitor product data management and engineering change network systems, to enable parallel development and design of different product components	5	4
			106582L6 Manage product development knowledge and continuously improve product design quality and efficiency	6	3
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Product material selection, appearance and functional design	106474L4 Produce complete and clear drawings of metal stamping parts, and ensure other departments such as mould design, production, assembly, and surface finishing can easily understand and coordinate the processing	4	3
			106481L4 Select computer-aided design / manufacturing (CAD / CAM) software to meet enterprise's actual application needs	4	3
		Perform computer-aided engineering analysis and simulation of product processing	106576L5 Conduct computer-simulated product functional testing to improve product engineering and functional design, shorten product engineering development time, and enhance manufacturing feasibility	5	4

			106577L5 Perform computer-aided engineering (CAE) analysis of the machining process and mould design to improve mould design, thereby increasing process efficiency and reducing product defects	5	4
		Create product concept creation and manage design modification requirements	106485L5 Create product concepts and manage design changes to ensure engineering designs meet the latest requirements	5	6
Minimum 8 years of functional area relevant experience is recommended					
Minimum 2 years of metal stamping and sheet metal product design engineer or equivalent experience is recommended					

Functional Area	Product Design and Development				
Job Position	Product Design Engineer (Metal Stamping and Sheet Metal Industry)				
Job Description	1. Based on customer requirements, and in accordance with production, assembly, and surface finishing requirements, design die-cast, cast and extruded parts, and lead engineers and technicians to design metal products, produce rapid prototypes and samples 2. Proficient in computer-aided engineering (CAE) analysis and computer simulation product functional testing software to optimise product design				
Core Competency Level and Credit (for reference)	Level 5 (25 credits)				
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency		
			Code	Level	Code
		Product material selection, appearance and functional design	106476L4 Master types, properties, and application areas of commonly used metal materials, composite materials, and other new materials, and select appropriate materials for product development	4	3
			106481L4 Select computer-aided design / manufacturing (CAD / CAM) software to meet enterprise's actual application needs	4	3
		Perform computer-aided engineering analysis and simulation of product processing	106576L5 Conduct computer-simulated product functional testing to improve product engineering and functional design, shorten product engineering development time, and enhance manufacturing feasibility	5	4
			106577L5 Perform computer-aided engineering (CAE) analysis of the machining process and mould design to improve mould design, thereby increasing process efficiency and reducing product defects	5	4
		Manage product design changes, continuously analyse and optimise	106485L5 Create product concepts and manage design changes to ensure engineering designs meet the latest requirements	5	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Perform product engineering design and digitise design data	106474L4 Produce complete and clear drawings of metal stamping parts, and ensure other departments such as mould design, production, assembly, and surface finishing can easily understand and coordinate the processing	4	3
		Perform product concept, appearance and function design	106480L4 Prepare product manuals, ensure accuracy and correctness of content and data, and meet customer requirements	4	3
			106482L4 Operate computer-aided industrial design (CAID) systems, conduct product appearance simulation and data analysis	4	4

	Minimum 7 years of functional area relevant experience is recommended Minimum 2 years of metal stamping and sheet metal product design assistant engineer or equivalent experience is recommended
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Functional Area	Product Design and Development				
Job Position	Product Design Assistant Engineer (Metal Stamping and Sheet Metal Industry)				
Job Description	1. Design various metal products and prepare product documentation 2. Proficiently use computer-aided design / manufacturing (CAD / CAM) software to perform computer drafting, design, and simulation				
Core Competency Level and Credit (for reference)	Level 4 (22 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Perform product engineering design and convert design data into digital formats	106474L4 Produce complete and clear drawings of metal stamping parts, and ensure other departments such as mould design, production, assembly, and surface finishing can easily understand and coordinate the processing	4	4
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Perform product concept designs for appearance and functionality	106480L4 Prepare product manuals, ensure accuracy and correctness of content and data, and meet customer requirements	4	3
			106482L4 Operate computer-aided industrial design (CAID) systems, conduct product appearance simulation and data analysis	4	4
			106485L5 Create product concepts and manage design changes to ensure engineering designs meet the latest requirements	5	6
	Additional Competency	Perform product and component geometry and tolerance specifications, and manage design data	106390L3 Perform product drafting and define geometric dimensions and tolerances to facilitate internal and customer communication regarding product, tooling, and component specifications	3	3
			106391L3 Perform detailed 2D computer-generated graphics, 3D surface and solid modelling and parametric design, provide computer-generated surface and solid models, execute design modifications for complex-shaped products, product and mould manufacturing programming	3	4
			106387L3 Perform 2D and 3D simulation and reverse engineering of metal products, provide computer models, execute product design modifications and product and mould manufacturing programming	3	3

			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
	Produce product prototypes		106388L3 Perform surface and heat treatment on metal product samples, providing samples that meet physical, functional, and surface quality requirements for customer and internal reference	3	4
			106392L3 Utilise rapid prototyping technology to create prototypes, quickly providing them to customers and internal staff for discussions on product design appearance and manufacturing feasibility	3	3
			106393L3 Arrange sample testing according to testing requirements to help ensure product meets required functional requirements before mass production, and use it as reference for design modifications if necessary	3	3
		Minimum 6 years of functional area relevant experience is recommended Minimum 2 years of metal stamping and sheet metal product design technician or equivalent experience is recommended			

Functional Area	Product Design and Development					
Job Position	Product Design Technician (Metal Stamping and Sheet Metal Industry)					
Job Description	Draw drawings as required, and perform 2D computer drafting, 3D surface and solid modeling, as well as parametric design					
Core Competency Level and Credit (for reference)	Level 3 (23 credits)					
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency			
			Code			Level
	Core Competency	Perform product and component geometry and tolerance specifications, and manage design data	106390L3 Perform product drafting and define geometric dimensions and tolerances to facilitate internal and customer communication regarding product, tooling, and component specifications	3	3	
			106391L3 Perform detailed 2D computer-generated graphics, 3D surface and solid modelling and parametric design, provide computer-generated surface and solid models, execute design modifications for complex-shaped products, product and mould manufacturing programming	3	4	
			106387L3 Perform 2D and 3D simulation and reverse engineering of metal products, provide computer models, execute product design modifications and product and mould manufacturing programming	3	3	
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3	
		Produce product prototypes	106392L3 Utilise rapid prototyping technology to create prototypes, quickly providing them to customers and internal staff for discussions on product design appearance and manufacturing feasibility	3	4	
			106393L3 Arrange sample testing according to testing requirements to help ensure product meets required functional requirements before mass production, and use it as reference for design modifications if necessary	3	3	
			106388L3 Perform surface and heat treatment on metal product samples, providing samples that meet physical, functional, and surface quality requirements for customer and internal reference	3	3	
Minimum 5 years of functional area relevant experience is recommended						

Functional Area	Product Design and Development				
Job Position	Project Manager (Metal Stamping and Sheet Metal Industry)				
Job Description	Develop project management strategies, manage project team, project risk, development and manufacturing cost				
Core Competency Level and Credit (for reference)	Level 5 (12 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Develop project management strategies, assess risks, and promote data-driven project management	106548L5 Develop project management strategies to ensure projects are implemented with appropriate resources and completed in timely and effective manner	5	4
			106580L5 Conduct risk management for product development projects, formulate effective contingency and emergency response measures	5	3
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Assemble product development project team with necessary knowledge to comprehensively manage the project and promote data-driven approach to project management	106579L5 Assemble product development project team, combine suitable internal and external human, machine, and material resources to effectively and quickly carry out the project	5	3
			106578L5 Conduct comprehensive management of product development projects, monitor and optimise project schedule, risks, scope, costs, and engineering changes	5	3
	Minimum 8 years of functional area relevant experience is recommended				
	Minimum 2 years of metal stamping and sheet metal project engineer or equivalent experience is recommended				

Functional Area	Product Design and Development					
Job Position	Project Engineer (Metal Stamping and Sheet Metal Industry)					
Job Description	Assemble product development project team, estimate and control product development and manufacturing costs					
Core Competency Level and Credit (for reference)	Level 5 (11 credits)					
Main Duties, Units of Competency and Functional Areas	Core Competency	Assemble product development project team with necessary knowledge to comprehensively manage the project and promote data-driven approach to project management	Unit of Competency			
			Code		Level	Credit
			106579L5 Assemble product development project team, combine suitable internal and external human, machine, and material resources to effectively and quickly carry out the project		5	3
			106578L5 Conduct comprehensive management of product development projects, monitor and optimise project schedule, risks, scope, costs, and engineering changes		5	3
	Additional Competency	Establish product development project milestones and control project execution time	111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis		4	5
			106484L4 Plan and control product development project schedules, ensure R&D projects are completed within controllable resources and timeframes		4	3
			106483L4 Coordinate manufacturing process of product prototypes, enhance prototype quality and efficiency in enterprises		4	3
			106486L4 Estimate and control product development and manufacturing costs, provide reliable information to set reasonable and competitive quotes, and ensure project profitability		4	4
Minimum 7 years of functional area relevant experience is recommended						
Minimum 2 years of metal stamping and sheet metal project assistant engineer or equivalent experience is recommended						

Functional Area	Product Design and Development				
Job Position	Project Assistant Engineer (Metal Stamping and Sheet Metal Industry)				
Job Description	Monitor the overall project progress, and coordinate prototype manufacturing				
Core Competency Level and Credit (for reference)	Level 4 (15 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code		Level
	Core Competency	Develop product development project milestones and control project execution timelines	106484L4 Plan and control product development project schedules, ensure R&D projects are completed within controllable resources and timeframes	4	3
			106483L4 Coordinate manufacturing process of product prototypes, enhance prototype quality and efficiency in enterprises	4	3
		Estimate and control product development and manufacturing costs, and collect and analyse cost data	106486L4 Estimate and control product development and manufacturing costs, provide reliable information to set reasonable and competitive quotes, and ensure project profitability	4	4
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Organise and follow up on project progress, collect relevant information, and conduct real-time data recording	106394L3 Organise project progress and related documents to ensure accuracy of information reported to superiors	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
		Understand mould, metal product, and plastic product manufacturing processes, and communicate with clients and internal teams	106487L4 Understand various requirements of physical and electronic drawings, and be familiar with mould manufacturing processes to effectively communicate with internal staff and customers regarding moulds and processes	4	3
			106491L3 Understand various requirements of physical and electronic drawings, and be familiar with metal product manufacturing processes to effectively communicate with internal staff and customers regarding metal products and processes	3	3
			106493L3 Understand various requirements of physical and electronic drawings, and be familiar with plastic product manufacturing processes to effectively communicate with internal staff and customers regarding plastic products and processes	3	3
	Minimum 6 years of functional area relevant experience is recommended				
	Minimum 2 years of metal stamping and sheet metal project coordinator or equivalent experience is recommended				

Functional Area	Product Design and Development				
Job Position	Project Coordinator (Metal Stamping and Sheet Metal Industry)				
Job Description	Organise project progress data, assist in developing product development project schedules				
Core Competency Level and Credit (for reference)	Level 3 (15 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Organise and follow up on project progress, collect relevant information, and conduct real-time data recording	106394L3 Organise project progress and related documents to ensure accuracy of information reported to superiors	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
		Understand mould, metal product, and plastic product manufacturing processes, and communicate with clients and internal teams	106487L4 Understand various requirements of physical and electronic drawings, and be familiar with mould manufacturing processes to effectively communicate with internal staff and customers regarding moulds and processes	4	3
			106491L3 Understand various requirements of physical and electronic drawings, and be familiar with metal product manufacturing processes to effectively communicate with internal staff and customers regarding metal products and processes	3	3
			106493L3 Understand various requirements of physical and electronic drawings, and be familiar with plastic product manufacturing processes to effectively communicate with internal staff and customers regarding plastic products and processes	3	3
			Minimum 5 years of functional area relevant experience is recommended		

Branches

Plastics Industry

Functional area

Product Design and Development

Role

QF
Level

Level 6

Engineering/Production
Director //
Engineering/Production
General Manager

Level 5

Product Design
Manager

Project Manager

Product Design
Engineer

Project Engineer

Level 4

Product Design
Assistant Engineer

Project Assistant
Engineer

Level 3

Product Design
Technician

Project
Coordinator

Functional Area	Product Design and Development				
Job Position	Engineering / Production Director // Engineering / Production General Manager (Plastics Industry)				
Job Description	Strategise to design, process improvement and production techniques of plastic products, optimise production, drive improvements in product functionality and cost reduction. Anticipate equipment, technologies, and systems required for enterprise future business development. Promote digitalisation in design, processes, and production				
Core Competency Level and Credit (for reference)	Level 6 (64 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Plan for plastic product, process, project management, and production technology development strategy, manage and optimise operation, implement automation, improve design and production efficiency	106605L6 Formulate enterprise development strategies, consider cultural conditions of both domestic and international markets and results of competitive analysis, and formulate medium-and long-term development goals and measures for enterprise	6	4
			106601L6 Develop risk management strategies to reduce and avoid risks based on the enterprise's long-term development goals and actual operating conditions	6	4
			106604L6 Establish and maintain quality management system to enhance competitiveness and positive image of enterprise through quality management	6	6
			106582L6 Manage product development knowledge and continuously improve product design quality and efficiency	6	3
			106548L5 Develop project management strategies to ensure projects are implemented with appropriate resources and completed in timely and effective manner	5	4
			106585L5 Design and plan plastic product manufacturing process to ensure costs, environmental protection, product functionality, and appearance meet standards	5	5
			106586L6 Plan and set up automation systems to improve level of automated manufacturing in enterprises	6	5
			106561L5 Continuously improve factory environment and promote factory quality management, optimise occupational health and safety management, and improve production and operational efficiency	5	5
			111556L6 Establish "Industry 4.0" architecture to interconnect devices within enterprise, achieve single data source, uncover useful data, and assist enterprise in digital transformation and comprehensive operational improvements	6	6
		Establish digital data management system based on "Industry 4.0" in product design, process development, and production sector, analyse data application areas, integrate data, improve			

		product design, processes, and production efficiency	111557L6 Analyse application areas of “Industry 4.0”, helps enterprise to conduct data-driven and intelligent operations in appropriate areas and continuously improve efficiency	6	5
			111552L5 Implement “Industry 4.0” vertical and horizontal integration and connecting various departments and levels within enterprise to achieve data interconnection and interoperability, comprehensive digital transformation can be realised	5	6
			106587L5 Manage process design knowledge, standardise it, and continuously improve the process	5	6
			111551L4 To implement and apply “Industry 4.0”, understand the scope, departments, necessary tools and facilities for Industry 4.0 implementation, and identify the various data on the dashboard for monitoring and preliminary analysis	4	5
	Additional Competency	Plan product design and development, include concepts, environmental protection, life cycle, and intellectual property protection	106560L5 Conduct eco-friendly product design and lifecycle management to continuously reduce environmental impact of products throughout their entire lifecycle, from manufacturing, usage and end-of-life disposal	5	6
			106574L5 Identify constraints on human, machine, and material resources to develop products	5	3
			106581L5 Protect enterprise intellectual property right through conduct various design registrations, maintain confidentiality, and undergo review	5	3
		Establish product design and development system to enable parallel development of individual product components and continuously improve product development efficiency	106575L5 Apply and monitor product data management and engineering change network systems, to enable parallel development and design of different product components	5	4
		Develop project management strategies, assess risks, and promote data-driven project management	106580L5 Conduct risk management for product development projects, formulate effective contingency and emergency response measures	5	3
		Perform factory management, monitor and supervise production equipment to improve product quality, manage workplace risks to improve factory environment, and quantify risk data	106458L5 Implement factory management to improve production efficiency and monitor the timely completion of production plans	5	5
			106460L4 Monitor and supervise the operation and maintenance of production equipment to reduce failure rates and ensure normal operation of production equipment	4	4
			106562L5 Implement workplace risk management to ensure the safety of employees and customers, and reduce operational and financial risks for business	5	3

Minimum 10 years of functional area relevant experience is recommended

Minimum 5 years of plastic product design manager, project manager or equivalent experience is recommended

Functional Area	Product Design and Development				
Job Position	Product Design Manager (Plastics Industry)				
Job Description	1. Manage product design department according to enterprise requirements for human resources, security, crisis management, knowledge management, and corporate governance etc., continuously improve product design standards and efficiency 2. Lead subordinates to optimise and improve product design, manage the related knowledge				
Core Competency Level and Credit (for reference)	Level 5 (24 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Code
	Core Competency	Plan product design and development, include concepts, environmental protection, life cycle, and intellectual property protection	106560L5 Conduct eco-friendly product design and lifecycle management to continuously reduce environmental impact of products throughout their entire lifecycle, from manufacturing, usage and end-of-life disposal	5	6
			106574L5 Identify constraints on human, machine, and material resources to develop products	5	3
			106581L5 Protect enterprise intellectual property right through conduct various design registrations, maintain confidentiality, and undergo review	5	3
		Establish product design and development system to enable parallel development of individual product components and continuously improve product development efficiency	106575L5 Apply and monitor product data management and engineering change network systems, to enable parallel development and design of different product components	5	4
			106582L6 Manage product development knowledge and continuously improve product design quality and efficiency	6	3
			111551L4 To implement and apply “Industry 4.0”, understand the scope, departments, necessary tools and facilities for Industry 4.0 implementation, and identify the various data on the dashboard for monitoring and preliminary analysis	4	5
	Additional Competency	Product material selection, appearance and functional design	106479L4 Master the types, properties, and application domains of traditional plastics, composite materials, and other emerging/new materials, and select appropriate materials for product development	4	3
			106481L4 Select computer-aided design/manufacturing (CAD/CAM) software to meet the company's actual application needs	4	3
		Perform computer-aided engineering analysis and simulation of product processing	106576L5 Conduct computer-simulated product functional testing to improve product engineering and functional design, shorten product engineering development time, and enhance manufacturing feasibility	5	4

			106577L5 Perform computer-aided engineering (CAE) analysis of the machining process and mould design to improve mould design, thereby increasing process efficiency and reducing product defects	5	4
		Create product concept creation and manage design modification requirements	106485L5 Create product concepts and manage design changes to ensure engineering designs meet the latest requirements	5	6
Minimum 8 years of functional area relevant experience is recommended					
Minimum 2 years of plastic product design engineer or equivalent experience is recommended					

Functional Area	Product Design and Development				
Job Position	Product Design Engineer (Plastics Industry)				
Job Description	1. Design plastic products in accordance with client requirements, while coordinating with production, assembly/disassembly, and surface finishing needs; lead engineers and technicians in the design of plastic products, as well as the creation of rapid prototypes and sample models 2. Proficient in computer-aided engineering (CAE) analysis and computer simulation product functional testing software to optimise product design				
Core Competency Level and Credit (for reference)	Level 5 (25 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Code
	Core Competency	Product material selection, appearance and functional design	106479L4 Master the types, properties, and application domains of traditional plastics, composite materials, and other emerging/new materials, and select appropriate materials for product development	4	3
			106481L4 Select computer-aided design/manufacturing (CAD/CAM) software to meet the company's actual application needs	4	3
		Perform computer-aided engineering analysis and simulation of product processing	106576L5 Conduct computer-simulated product functional testing to improve product engineering and functional design, shorten product engineering development time, and enhance manufacturing feasibility	5	4
			106577L5 Perform computer-aided engineering (CAE) analysis of the machining process and mould design to improve mould design, thereby increasing process efficiency and reducing product defects	5	4
		Manage product design changes, continuously analyse and optimise	106485L5 Create product concepts and manage design changes to ensure engineering designs meet the latest requirements	5	6
			111551L4 To implement and apply “Industry 4.0”, understand the scope, departments, necessary tools and facilities for Industry 4.0 implementation, and identify the various data on the dashboard for monitoring and preliminary analysis	4	5
	Additional Competency	Perform product engineering design and digitise design data	106477L4 Design and manufacture rapid moulds for plastic products, to meet various requirements of customers	4	4
			106478L4 Produce complete and clear plastic part drawings to facilitate understanding and processing by other departments, include mould design, production, assembly/disassembly, and surface treatment	4	4
		Perform product concept, appearance and function design	106480L4 Prepare product manuals, ensure accuracy and correctness of content and data, and meet customer requirements	4	3

			106482L4 Operate a computer-aided industrial design (CAID) system to perform product appearance simulation and data analysis.	4	4
Minimum 7 years of functional area relevant experience is recommended Minimum 2 years of plastic product design assistant engineer or equivalent experience is recommended					

Functional Area	Product Design and Development				
Job Position	Product Design Assistant Engineer (Plastics Industry)				
Job Description	1. Design various plastics products and prepare product documentation 2. Proficiently use computer-aided design / manufacturing (CAD / CAM) software to perform computer drafting, design, and simulation				
Core Competency Level and Credit (for reference)	Level 4 (22 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Perform product engineering design and convert design data into digital formats	106477L4 Design and manufacture rapid moulds for plastic products, to meet various requirements of customers	4	4
			106478L4 Produce complete and clear plastic part drawings to facilitate understanding and processing by other departments, include mould design, production, assembly / disassembly, and surface treatment	4	4
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Perform product concept designs for appearance and functionality	106480L4 Prepare product manuals, ensure accuracy and correctness of content and data, and meet customer requirements	4	3
			106482L4 Operate computer-aided industrial design (CAID) systems, conduct product appearance simulation and data analysis	4	4
			106485L5 Create product concepts and manage design changes to ensure engineering designs meet the latest requirements	5	6
	Additional Competency	Perform product and component geometry and tolerance specifications, and manage design data	106390L3 Perform product drafting and define geometric dimensions and tolerances to facilitate internal and customer communication regarding product, tooling, and component specifications	3	3
			106391L3 Perform detailed 2D computer-generated graphics, 3D surface and solid modelling and parametric design, provide computer-generated surface and solid models, execute design modifications for complex-shaped products, product and mould manufacturing programming	3	4
			106389L3 Perform 3D modelling and reverse engineering of plastic products, provide computer-generated 3D models to facilitate product design and modification, as well as product and mould manufacturing programming	3	4

			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
		Produce product prototypes	106392L3 Utilise rapid prototyping technology to create prototypes, quickly providing them to customers and internal staff for discussions on product design appearance and manufacturing feasibility	3	4
			106393L3 Arrange sample testing according to testing requirements to help ensure product meets required functional requirements before mass production, and use it as reference for design modifications if necessary	3	3
			106372L2 Carry out surface finishing of plastic product prototypes to improve surface quality	2	3

Minimum 6 years of functional area relevant experience is recommended

Minimum 2 years of plastic product design technician or equivalent experience is recommended

Functional Area	Product Design and Development				
Job Position	Product Design Technician (Plastics Industry)				
Job Description	Draw drawings as required, and perform 2D computer drafting, 3D surface and solid modeling, as well as parametric design				
Core Competency Level and Credit (for reference)	Level 3 (24 credits)				
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency		
			Code	Level	Credit
		Perform product and component geometry and tolerance specifications, and manage design data	106390L3 Perform product drafting and define geometric dimensions and tolerances to facilitate internal and customer communication regarding product, tooling, and component specifications	3	3
			106391L3 Perform detailed 2D computer-generated graphics, 3D surface and solid modelling and parametric design, provide computer-generated surface and solid models, execute design modifications for complex-shaped products, product and mould manufacturing programming	3	4
			106389L3 Perform 3D modelling and reverse engineering of plastic products, provide computer-generated 3D models to facilitate product design and modification, as well as product and mould manufacturing programming	3	4
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
		Produce product prototypes	106392L3 Utilise rapid prototyping technology to create prototypes, quickly providing them to customers and internal staff for discussions on product design appearance and manufacturing feasibility	3	4
			106393L3 Arrange sample testing according to testing requirements to help ensure product meets required functional requirements before mass production, and use it as reference for design modifications if necessary	3	3
			106372L2 Carry out surface finishing of plastic product prototypes to improve surface quality	2	3
			Minimum 5 years of functional area relevant experience is recommended		

Functional Area	Product Design and Development				
Job Position	Project Manager (Plastics Industry)				
Job Description	Develop project management strategies, manage project team, project risk, development and manufacturing cost				
Core Competency Level and Credit (for reference)	Level 5 (12 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Develop project management strategies, assess risks, and promote data-driven project management	106548L5 Develop project management strategies to ensure projects are implemented with appropriate resources and completed in timely and effective manner	5	4
			106580L5 Conduct risk management for product development projects, formulate effective contingency and emergency response measures	5	3
			111551L4 To implement and apply “Industry 4.0”, understand the scope, departments, necessary tools and facilities for Industry 4.0 implementation, and identify the various data on the dashboard for monitoring and preliminary analysis	4	5
	Additional Competency	Assemble product development project team with necessary knowledge to comprehensively manage the project and promote data-driven approach to project management	106579L5 Assemble product development project team, combine suitable internal and external human, machine, and material resources to effectively and quickly carry out the project	5	3
			106578L5 Conduct comprehensive management of product development projects, monitor and optimise project schedule, risks, scope, costs, and engineering changes	5	3
	Minimum 8 years of functional area relevant experience is recommended				
	Minimum 2 years of plastic project engineer or equivalent experience is recommended				

Functional Area	Product Design and Development					
Job Position	Project Engineer (Plastics Industry)					
Job Description	Assemble product development project team, estimate and control product development and manufacturing costs					
Core Competency Level and Credit (for reference)	Level 5 (11 credits)					
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency			
			Code		Level	Credit
			106579L5 Assemble product development project team, combine suitable internal and external human, machine, and material resources to effectively and quickly carry out the project		5	3
			106578L5 Conduct comprehensive management of product development projects, monitor and optimise project schedule, risks, scope, costs, and engineering changes		5	3
	111551L4 To implement and apply “Industry 4.0”, understand the scope, departments, necessary tools and facilities for Industry 4.0 implementation, and identify the various data on the dashboard for monitoring and preliminary analysis		4	5		
	Additional Competency	Establish product development project milestones and control project execution time	106484L4 Develop and control product development project timelines to ensure that R&D projects are completed within manageable resources and timeframes		4	3
			106483L4 By coordinating the product sample manufacturing process, we can improve the quality and efficiency of enterprise sample production.		4	3
		Estimate and control product development and manufacturing costs, collect and analyse cost data	106486L4 Estimate and control product development and manufacturing costs, provide reliable information to set reasonable and competitive quotes, and ensure project profitability		4	4
Minimum 7 years of functional area relevant experience is recommended						
Minimum 2 years of plastic project assistant engineer or equivalent experience is recommended						

Functional Area	Product Design and Development				
Job Position	Project Assistant Engineer (Plastics Industry)				
Job Description	Monitor the overall project progress, and coordinate prototype manufacturing				
Core Competency Level and Credit (for reference)	Level 4 (15 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Develop product development project milestones and control project execution timelines	106484L4 Plan and control product development project schedules, ensure R&D projects are completed within controllable resources and timeframes	4	3
			106483L4 Coordinate manufacturing process of product prototypes, enhance prototype quality and efficiency in enterprises	4	3
		Estimate and control product development and manufacturing costs, and collect and analyse cost data	106486L4 Estimate and control product development and manufacturing costs, provide reliable information to set reasonable and competitive quotes, and ensure project profitability	4	4
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Organise and follow up on project progress, collect relevant information, and conduct real-time data recording	106394L3 Organise project progress and related documents to ensure accuracy of information reported to superiors	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
		Understand mould, metal product, and plastic product manufacturing processes, and communicate with clients and internal teams	106487L4 Understand various requirements of physical and electronic drawings, and be familiar with mould manufacturing processes to effectively communicate with internal staff and customers regarding moulds and processes	4	3
			106491L3 Understand various requirements of physical and electronic drawings, and be familiar with metal product manufacturing processes to effectively communicate with internal staff and customers regarding metal products and processes	3	3
			106493L3 Understand various requirements of physical and electronic drawings, and be familiar with plastic product manufacturing processes to effectively communicate with internal staff and customers regarding plastic products and processes	3	3
Minimum 6 years of functional area relevant experience is recommended					
Minimum 2 years of plastic project coordinator or equivalent experience is recommended					

Functional Area	Product Design and Development				
Job Position	Project Coordinator (Plastics Industry)				
Job Description	Organise project progress data, assist in developing product development project schedules				
Core Competency Level and Credit (for reference)	Level 3 (15 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Organise and follow up on project progress, collect relevant information, and conduct real-time data recording	106394L3 Organise project progress and related documents to ensure accuracy of information reported to superiors	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
		Understand mould, metal product, and plastic product manufacturing processes, and communicate with clients and internal teams	106487L4 Understand various requirements of physical and electronic drawings, and be familiar with mould manufacturing processes to effectively communicate with internal staff and customers regarding moulds and processes	4	3
			106491L3 Understand various requirements of physical and electronic drawings, and be familiar with metal product manufacturing processes to effectively communicate with internal staff and customers regarding metal products and processes	3	3
			106493L3 Understand various requirements of physical and electronic drawings, and be familiar with plastic product manufacturing processes to effectively communicate with internal staff and customers regarding plastic products and processes	3	3
			Minimum 5 years of functional area relevant experience is recommended		

Branches

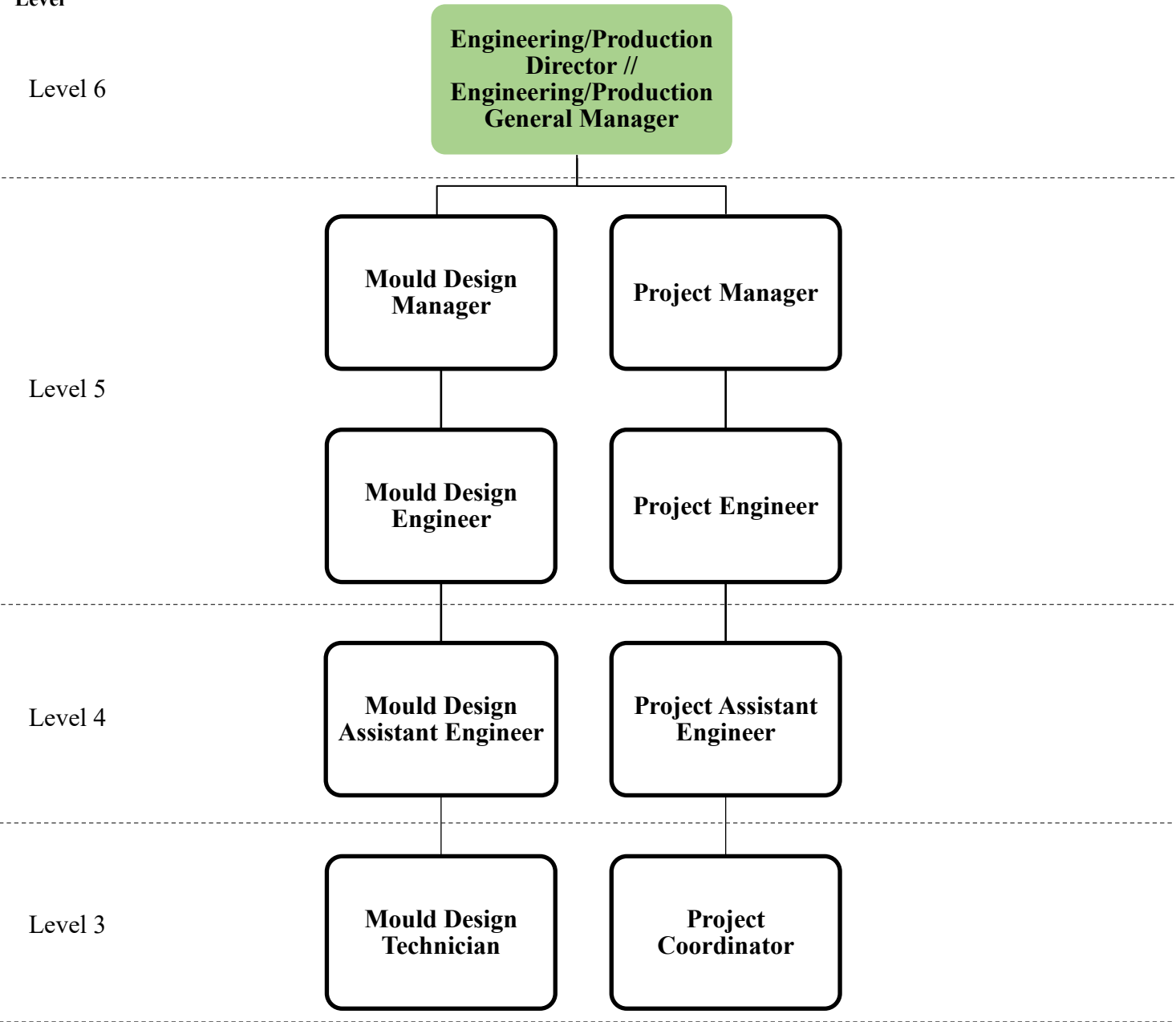
Tooling Industry

Functional area

Product Design and Development

Role

QF
Level



Functional Area	Product Design and Development				
Job Position	Engineering / Production Director // Engineering / Production General Manager (Tooling Industry)				
Job Description	Plan the strategy for tooling design and refine its manufacturing processes and production techniques to optimise production, thereby enhance mould functionality and reducing costs. Anticipate the equipment, technologies, and systems required for future business development. Promote digitalisation in design, processes, and production				
Core Competency Level and Credit (for reference)	Level 6 (64 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Plan the strategy for developing tooling products, processes, project management, and production techniques; manage and optimise operations; implement automation; and improve design and production efficiency	106605L6 Formulate enterprise development strategies, consider cultural conditions of both domestic and international markets and results of competitive analysis, and formulate medium-and long-term development goals and measures for enterprise	6	4
			106601L6 Develop risk management strategies to reduce and avoid risks based on the enterprise's long-term development goals and actual operating conditions	6	4
			106604L6 Establish and maintain quality management system to enhance competitiveness and positive image of enterprise through quality management	6	6
			106582L6 Manage product development knowledge and continuously improve product design quality and efficiency	6	3
			106548L5 Develop project management strategies to ensure projects are implemented with appropriate resources and completed in timely and effective manner	5	4
			106583L6 Research, development, plan, and schedule mould manufacturing processes to ensure all aspects, include cost control, environmental protection, mould functionality, and appearance, meet the standards	6	6
			106586L6 Plan and set up automation systems to improve level of automated manufacturing in enterprises	6	5
			106561L5 Continuously improve factory environment and promote factory quality management, optimise occupational health and safety management, and improve production and operational efficiency	5	5
			111556L6 Establish “Industry 4.0” architecture to interconnect devices within enterprise, achieve single data source, uncover useful data, and assist enterprise in digital transformation and comprehensive operational improvements	6	6
		Establish digital data management system based on "Industry 4.0" in product design, process development, and production; analyse data application			

		areas; integrate data; and improve the efficiency of product design, processes, and production	111557L6 Analyse application areas of “Industry 4.0”, helps enterprise to conduct data-driven and intelligent operations in appropriate areas and continuously improve efficiency	6	5
			111552L5 Implement “Industry 4.0” vertical and horizontal integration and connecting various departments and levels within enterprise to achieve data interconnection and interoperability, comprehensive digital transformation can be realised	5	6
			106587L5 Manage process design knowledge, standardise it, and continuously improve the process	5	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Plan product design and development, include concepts, environmental protection, life cycle, and intellectual property protection	106560L5 Conduct eco-friendly product design and lifecycle management to continuously reduce environmental impact of products throughout their entire lifecycle, from manufacturing, usage and end-of-life disposal	5	6
			106574L5 Identify constraints on human, machine, and material resources to develop products	5	3
			106581L5 Protect enterprise intellectual property right through conduct various design registrations, maintain confidentiality, and undergo review	5	3
		Establish product design and development system to enable the parallel development of individual product components and continuously improve product development efficiency	106575L5 Apply and monitor product data management and engineering change network systems, to enable parallel development and design of different product components	5	4
		Develop project management strategies, assess risks, and promote data-driven project management	106580L5 Conduct risk management for product development projects, formulate effective contingency and emergency response measures	5	3
		Conduct overall production management of all workshops in the factory, supervise production and equipment maintenance, and monitor and reduce production risks	106458L5 Implement factory management to improve production efficiency and monitor the timely completion of production plans	5	5
			106460L4 Monitor and supervise operation and maintenance of production equipment, reduce rate of equipment failures, and ensure normal operation of production equipment	4	4
			106562L5 Implement workplace risk management to ensure the safety of employees and customers, and reduce operational and financial risks for business	5	3

Minimum 10 years of functional area relevant experience is recommended

Minimum 5 years of mould design manager, project manager or equivalent experience is recommended

Functional Area	Product Design and Development				
Job Position	Mould Design Manager (Tooling Industry)				
Job Description	1. In accordance with enterprise's requirements for human resources, security, crisis management, knowledge management, and corporate governance, manage mould design department and continuously improve the level and efficiency of mould and product design 2. Lead subordinates to improve product design through mould design optimisation and manage related knowledge				
Core Competency Level and Credit (for reference)	Level 5 (24 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Plan product design and development, include concepts, environmental protection, life cycle, and intellectual property protection	106560L5 Conduct eco-friendly product design and lifecycle management to continuously reduce environmental impact of products throughout their entire lifecycle, from manufacturing, usage and end-of-life disposal	5	6
			106574L5 Identify constraints on human, machine, and material resources to develop products	5	3
			106581L5 Protect enterprise intellectual property right through conduct various design registrations, maintain confidentiality, and undergo review	5	3
			106575L5 Apply and monitor product data management and engineering change network systems, to enable parallel development and design of different product components	5	4
		Establish product design and development system to enable the parallel development of individual product components and continuously improve product development efficiency	106582L6 Manage product development knowledge and continuously improve product design quality and efficiency	6	3
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Mould material selection and appearance and function design	106570L5 Integrate customer requirements and relevant international standards to develop the combination and structural design of injection moulding dies (applicable to injection mould factories or departments)	5	6
			106572L5 Integrate customer requirements and relevant international standards, to develop sheet metal stamping mould assembly and structural designs (applicable to stamping factories or departments)	5	4
			106573L5 Integrate customer requirements and relevant international standards, to develop die casting and foundry mould assembly and structural designs (applicable to die casting and foundry mould factories or departments)	5	4

			106467L4 Integrate customer requirements and relevant international standards, develop mould combinations and structural designs for plastic moulding processes other than injection moulding	4	4
			106470L4 Integrate and organise customer requirements and relevant international standards to develop combination and structural designs for other stamping dies (applicable to stamping die factories or departments)	4	4
			106481L4 Select computer-aided design / manufacturing (CAD / CAM) software to meet enterprise's actual application needs	4	3
		Conduct computer-aided engineering analysis and simulation of product processing	106576L5 Conduct computer-simulated product functional testing to improve product engineering and functional design, shorten product engineering development time, and enhance manufacturing feasibility	5	4
			106577L5 Perform computer-aided engineering (CAE) analysis of the machining process and mould design to improve mould design, thereby increasing process efficiency and reducing product defects	5	4
		Manage product design changes and continuous analysis and optimisation	106485L5 Create product concepts and manage design changes to ensure engineering designs meet the latest requirements	5	6
		Minimum 8 years of functional area relevant experience is recommended Minimum 2 years of mould design engineer or equivalent experience is recommended			

Functional Area	Product Design and Development				
Job Position	Mould Design Engineer (Tooling Industry)				
Job Description	1. Based on customer requirements, conduct mould assembly and structural design, and lead engineers and technicians in functional design 2. Proficient in computer-aided engineering analysis (CAE) and computer simulation software for product functional testing; optimise mould and product design				
Core Competency Level and Credit (for reference)	Level 5 (44 credits)				
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency		
			Code	Level	Credit
		Mould material selection and appearance and function design	106570L5 Integrate customer requirements and relevant international standards to develop the combination and structural design of injection moulding dies (applicable to injection mould factories or departments)	5	6
			106572L5 Integrate customer requirements and relevant international standards, to develop sheet metal stamping mould assembly and structural designs (applicable to stamping factories or departments)	5	4
			106573L5 Integrate customer requirements and relevant international standards, to develop die casting and foundry mould assembly and structural designs (applicable to die casting and foundry mould factories or departments)	5	4
			106467L4 Integrate customer requirements and relevant international standards, develop mould combinations and structural designs for plastic moulding processes other than injection moulding	4	4
			106470L4 Integrate and compile customer requirements and relevant international standards, and formulate combination and structural designs for various types of stamping dies (applicable to stamping die factories or departments)	4	4
			106481L4 Select computer-aided design / manufacturing (CAD / CAM) software to meet enterprise's actual application needs	4	3
		Conduct computer-aided engineering analysis and simulation of product processing	106576L5 Conduct computer-simulated product functional testing to improve product engineering and functional design, shorten product engineering development time, and enhance manufacturing feasibility	5	4
			106577L5 Perform computer-aided engineering (CAE) analysis of the machining process and mould design to improve mould design, thereby increasing process efficiency and reducing product defects	5	4

		Manage product design changes and continuous analysis and optimisation	106485L5 Create product concepts and manage design changes to ensure engineering designs meet the latest requirements	5	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Perform tooling engineering design and digitise design data	106571L5 Integrate customer requirements and relevant international standards to develop functional designs for injection moulding dies (applicable to injection mould factories or departments)	5	6
			106468L4 Integrate customer requirements and relevant international standards, develop functional designs for single-station and compound stamping dies in sheet metal processing (applicable to stamping die factories or departments)	4	4
			106469L4 Integrate customer requirements and relevant international standards, develop functional designs for progressive and transfer stamping dies in sheet metal processing (applicable to stamping die factories or departments)	4	4
			106471L4 Integrate customer requirements and relevant international standards, develop functional designs for die casting and casting moulds	4	4
		Perform tooling concept, appearance and function design	106472L4 Develop mould manual, ensure accuracy of its content and data, and meet customer requirements	4	3
			106482L4 Operate computer-aided industrial design (CAID) systems, conduct product appearance simulation and data analysis	4	4
	Minimum 7 years of functional area relevant experience is recommended				
Minimum 2 years of mould design assistant engineer or equivalent experience is recommended					

Functional Area	Product Design and Development				
Job Position	Mould Design Assistant Engineer (Tooling Industry)				
Job Description	1. Design various moulds and prepare product documentation 2. Proficiently use computer-aided design / manufacturing (CAD / CAM) software to perform computer drafting, design, and simulation				
Core Competency Level and Credit (for reference)	Level 4 (36 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Perform mould engineering design and digitise design data	106571L5 Integrate customer requirements and relevant international standards to develop functional designs for injection moulding dies (applicable to injection mould factories or departments)	5	6
			106468L4 Integrate customer requirements and relevant international standards, develop functional designs for single-station and compound stamping dies in sheet metal processing (applicable to stamping die factories or departments)	4	4
			106469L4 Integrate customer requirements and relevant international standards, develop functional designs for progressive and transfer stamping dies in sheet metal processing (applicable to stamping die factories or departments)	4	4
			106471L4 Integrate customer requirements and relevant international standards, develop functional designs for die casting and casting moulds	4	4
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
			Perform mould concept, appearance and function design	106472L4 Develop mould manual, ensure accuracy of its content and data, and meet customer requirements	4
	106482L4 Operate computer-aided industrial design (CAID) systems, conduct product appearance simulation and data analysis	4		4	
	106485L5 Create product concepts and manage design changes to ensure engineering designs meet the latest requirements	5		6	
	Additional	Perform geometric and tolerance design of moulds and components, record and process design data		106390L3 Perform product drafting and define geometric dimensions and tolerances to facilitate internal and customer communication regarding product, tooling, and component specifications	3

		106391L3 Perform detailed 2D computer-generated graphics, 3D surface and solid modelling and parametric design, provide computer-generated surface and solid models, execute design modifications for complex-shaped products, product and mould manufacturing programming	3	4
		111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
Minimum 6 years of functional area relevant experience is recommended				
Minimum 2 years of mould design technician or equivalent experience is recommended				

Functional Area	Product Design and Development					
Job Position	Mould Design Technician (Tooling Industry)					
Job Description	Sketch drawings as required, and perform 2D computer-aided drafting, 3D surface and solid simulation, and parametric design					
Core Competency Level and Credit (for reference)	Level 3 (10 credits)					
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency			
			Code		Level	Credit
			106390L3 Perform product drafting and define geometric dimensions and tolerances to facilitate internal and customer communication regarding product, tooling, and component specifications		3	3
			106391L3 Perform detailed 2D computer-generated graphics, 3D surface and solid modelling and parametric design, provide computer-generated surface and solid models, execute design modifications for complex-shaped products, product and mould manufacturing programming		3	4
	111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations		3	3		
Minimum 5 years of functional area relevant experience is recommended						

Functional Area	Product Design and Development				
Job Position	Project Manager (Tooling Industry)				
Job Description	Develop project management strategies and manage project teams, project risks, and development and manufacturing costs				
Core Competency Level and Credit (for reference)	Level 5 (12 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Develop project management strategies, assess risks, and promote data-driven project management	106548L5 Develop project management strategies to ensure projects are implemented with appropriate resources and completed in timely and effective manner	5	4
			106580L5 Conduct risk management for product development projects, formulate effective contingency and emergency response measures	5	3
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Assemble tooling development project team with the necessary knowledge to comprehensively manage the project and promote data-driven project management	106579L5 Assemble product development project team, combine suitable internal and external human, machine, and material resources to effectively and quickly carry out the project	5	3
			106578L5 Conduct comprehensive management of product development projects, monitor and optimise project schedule, risks, scope, costs, and engineering changes	5	3
	Minimum 8 years of functional area relevant experience is recommended				
Minimum 2 years of mould project engineer or equivalent experience is recommended					

Functional Area	Product Design and Development				
Job Position	Project Engineer (Tooling Industry)				
Job Description	Assemble product development project team, estimate, control product development and manufacturing costs				
Core Competency Level and Credit (for reference)	Level 5 (11 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Assemble tooling development project team with the necessary knowledge to comprehensively manage the project and promote data-driven project management	106579L5 Assemble product development project team, combine suitable internal and external human, machine, and material resources to effectively and quickly carry out the project	5	3
			106578L5 Conduct comprehensive management of product development projects, monitor and optimise project schedule, risks, scope, costs, and engineering changes	5	3
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Establish product development project milestones and control project execution time	106484L4 Plan and control product development project schedules, ensure R&D projects are completed within controllable resources and timeframes	4	3
			106483L4 Coordinate manufacturing process of product prototypes, enhance prototype quality and efficiency in enterprises	4	3
		Estimate and control product development and control costs, collect and analyse cost data	106486L4 Estimate and control product development and manufacturing costs, provide reliable information to set reasonable and competitive quotes, and ensure project profitability	4	4
	Minimum 7 years of functional area relevant experience is recommended				
Minimum 2 years of mould project assistant engineer or equivalent experience is recommended					

Functional Area	Product Design and Development				
Job Position	Project Assistant Engineer (Tooling Industry)				
Job Description	Take control of the overall project schedule and able to coordinate the production of prototypes				
Core Competency Level and Credit (for reference)	Level 4 (15 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Establish product development project milestones and control project execution time	106484L4 Plan and control product development project schedules, ensure R&D projects are completed within controllable resources and timeframes	4	3
			106483L4 Coordinate manufacturing process of product prototypes, enhance prototype quality and efficiency in enterprises	4	3
		Estimate and control product development and control costs, collect and analyse cost data	106486L4 Estimate and control product development and manufacturing costs, provide reliable information to set reasonable and competitive quotes, and ensure project profitability.	4	4
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Organise and track project progress, collect relevant data, and record data in real time	106394L3 Organise project progress and related documents to ensure accuracy of information reported to superiors	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
		Understand the manufacturing processes of moulds, metal products, and plastic products, and communicate with customers and internally	106487L4 Understand requirements of both physical and electronic drawings and be familiar with mould manufacturing process to facilitate internal and customer communication regarding moulds and processes (applicable to the tooling industry)	4	3
			106491L3 Understand various requirements of physical and electronic drawings, and be familiar with metal product manufacturing processes to effectively communicate with internal staff and customers regarding metal products and processes (applicable to the metal industry)	3	3
			106493L3 Understand various requirements of physical and electronic drawings and be familiar with plastic product manufacturing processes to effectively communicate with internal staff and customers regarding metal products and processes (applicable to the plastics industry)	3	3

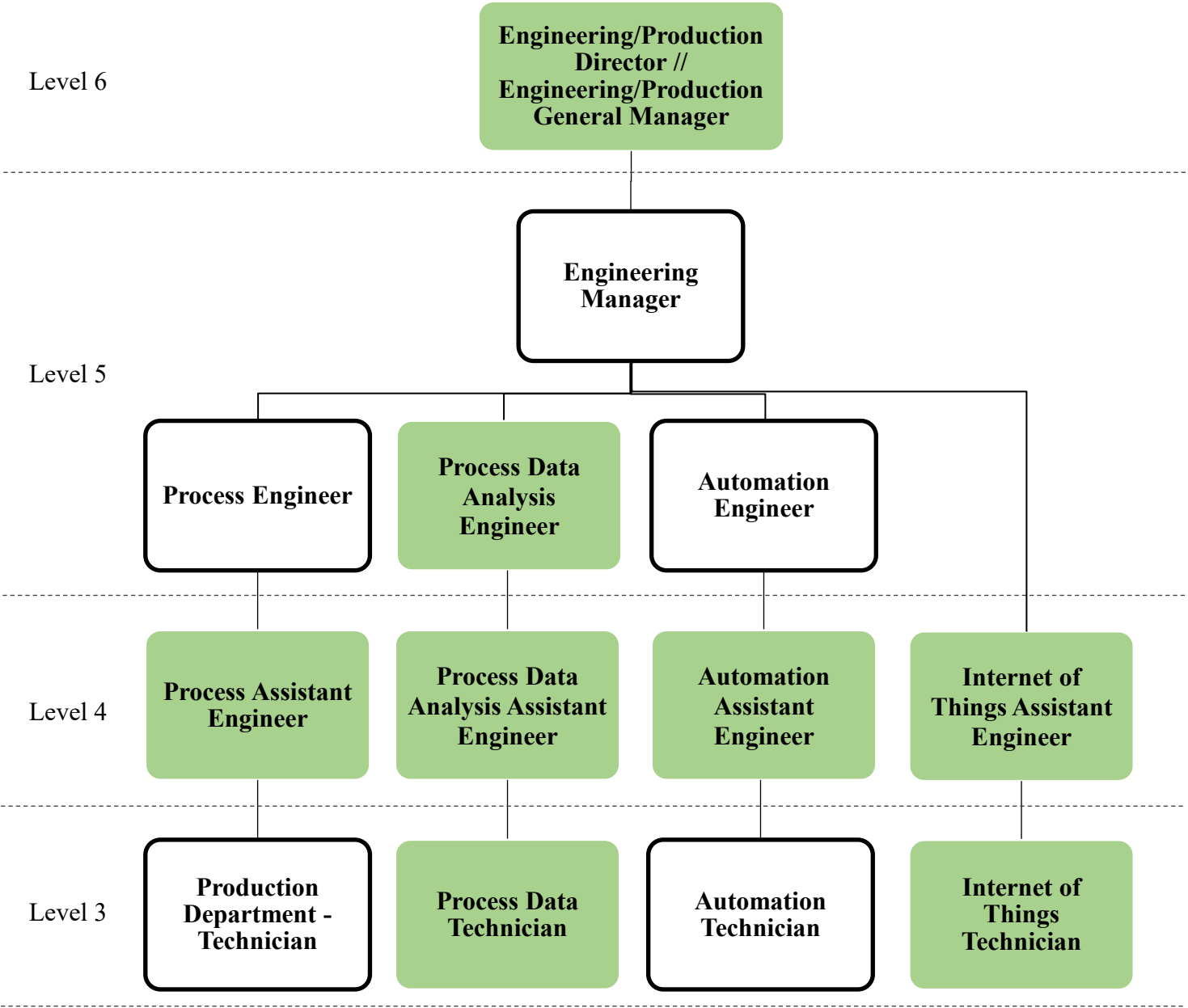
	Minimum 6 years of functional area relevant experience is recommended Minimum 2 years of mould project coordinator or equivalent experience is recommended
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Functional Area	Product Design and Development					
Job Position	Project Coordinator (Tooling Industry)					
Job Description	Compile project progress data and assist in development of product development project timelines					
Core Competency Level and Credit (for reference)	Level 3 (15 credits)					
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency			
			Code	Level	Credit	
		Organise and track project progress, collect relevant data, and record data in real time	106394L3 Organise project progress and related documents to ensure accuracy of information reported to superiors	3	3	
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3	
			Understand the manufacturing processes of moulds, metal products, plastic products, and communicate with customers and internally	106487L4 Understand requirements of both physical and electronic drawings and be familiar with mould manufacturing process to facilitate internal and customer communication regarding moulds and processes (applicable to the tooling industry)	4	3
				106491L3 Understand various requirements of physical and electronic drawings and be familiar with metal product manufacturing processes to effectively communicate with internal staff and customers regarding metal products and processes (applicable to the metal industry)	3	3
				106493L3 Understand various requirements of physical and electronic drawings and be familiar with plastic product manufacturing processes to effectively communicate with internal staff and customers regarding metal products and processes (applicable to the plastics industry)	3	3
				Minimum 5 years of functional area relevant experience is recommended		

Branches	Metal Die Casting, Casting and Extrusion Industry
Functional area	Process Design and Development

Role

QF
Level



Functional Area	Process Design and Development				
Job Position	Engineering / Production Director // Engineering / Production General Manager (Metal Die casting, casting and extrusion Industry)				
Job Description	Strategise the design of metal die casting, casting and extrusion products, and refine associated process and production techniques to optimise production, enhance product functionality, and reduce costs. Anticipate future enterprise requirements for equipment, technologies, and systems. Promote digitalised operations across design, process, and production domains				
Core Competency Level and Credit (for reference)	Level 6 (64 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Formulate strategic plans for the design, process development, project management, and production technology advancement of metal die casting, casting and extrusion products, manage and optimise operations, implement automation initiatives to enhance design and production efficiency	106605L6 Formulate enterprise development strategies, consider cultural conditions of both domestic and international markets and results of competitive analysis, and formulate medium-and long-term development goals and measures for enterprise	6	4
			106601L6 Develop risk management strategies to reduce and avoid risks based on the enterprise's long-term development goals and actual operating conditions	6	4
			106604L6 Establish and maintain quality management system to enhance competitiveness and positive image of enterprise through quality management	6	6
			106603L6 Research, standardise, and plan manufacturing process for die casting and casting products, to ensure all indicators include cost control, environmental protection, product functionality, and appearance etc. meet the standards	6	5
			106582L6 Manage product development knowledge and continuously improve product design quality and efficiency	6	3
			106548L5 Develop project management strategies to ensure projects are implemented with appropriate resources and completed in timely and effective manner	5	4
			106586L6 Plan and set up automation systems to improve level of automated manufacturing in enterprises	6	5
			106561L5 Continuously improve factory environment and promote factory quality management, optimise occupational health and safety management, and improve production and operational efficiency	5	5
			111556L6 Establish “Industry 4.0” architecture to interconnect devices within enterprise, achieve single data source, uncover useful data, and assist enterprise in digital transformation and comprehensive operational improvements	6	6
		Establish digital data management system based on “Industry 4.0” in the domains of product design, process development, and production, analyse applicable data domains, integrate data			

		sources, and enhance the effectiveness of product design, process development, and production operations	111557L6 Analyse application areas of “Industry 4.0”, helps enterprise to conduct data-driven and intelligent operations in appropriate areas and continuously improve efficiency	6	5
			111552L5 Implement “Industry 4.0” vertical and horizontal integration and connecting various departments and levels within enterprise to achieve data interconnection and interoperability, comprehensive digital transformation can be realised	5	6
			106587L5 Manage process design knowledge, standardise it, and continuously improve the process	5	6
			111551L4 To implement and apply “Industry 4.0”, understand the scope, departments, necessary tools and facilities for “Industry 4.0” implementation, and identify the various data on the dashboard for monitoring and preliminary analysis	4	5
	Additional Competency	Plan product design and development, encompassing concept formulation, environmental considerations, life cycle assessment, and intellectual property protection	106560L5 Conduct environmentally conscious product design and life cycle management to continuously minimise the environmental impact of products throughout manufacturing, use, and end-of-life disposal	5	6
			106574L5 Perform conceptual product design and engineering integration, balancing customer requirements, market trends, and internal constraints on human, machine, and material resources	5	3
			106581L5 Execute design registration, confidentiality measures, and review processes to safeguard enterprise intellectual property	5	3
		Establish product design and development system enabling concurrent development of individual product components while continuously improving product development efficiency	106575L5 Apply and monitor product data management and engineering change control systems to facilitate concurrent development and design of different product components	5	4
		Formulate project management strategies, assess risks, and implement digitised project management practices	106580L5 Conduct risk management for product development projects, formulate effective contingency and emergency response measures	5	3
		Manage factory operations, supervise and monitor production equipment to improve product quality, manage workplace risks to enhance the factory environment, and digitise risk data	106458L5 Execute workshop management to enhance production efficiency and monitor production schedules to ensure timely completion	5	5
			106460L4 Monitor and supervise the operation and maintenance of production equipment to reduce failure rates and ensure reliable equipment performance	4	4
			106562L5 Implement workplace risk management to protect the safety of employees and customers, and to reduce enterprise operational and financial risks	5	3

	Minimum 10 years of functional area relevant experience is recommended Minimum 5 years of metal die casting, casting and extrusion engineering manager or equivalent experience is recommended
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Functional Area	Process Design and Development				
Job Position	Engineering Manager (Metal Die casting, casting and extrusion Industry)				
Job Description	Plan the manufacturing processes and automation systems for metal products, manage and continuously improve the knowledge base for metal product process design				
Core Competency Level and Credit (for reference)	Level 5 (16 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Code
	Core Competency	Plan and configure automation systems	106586L6 Plan and set up automation systems to improve level of automated manufacturing in enterprises	6	5
		Manage and continuously improve process design knowledge	106587L5 Manage process design knowledge, standardise it, and continuously improve the process	5	6
		Introduce and apply “Industry 4.0” principles, understand the applicable domains, departments, essential tools, and facilities for Industry 4.0, implementation, identify various data items displayed on dashboards, and perform monitoring and preliminary analysis	111551L4 Introduce and apply “Industry 4.0”, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Optimise process sequences and production layouts to enhance process efficiency, and conduct real-time analysis of process parameters and manufacturing data	106500L5 Develop lean manufacturing and flexible manufacturing processes, layouts, and facilities, analyse flexible manufacturing requirements; select equipment; and achieve flexible manufacturing goals	5	6
		Implement digitisation and intelligent operations for metal die casting, casting and extrusion products, establish automated data acquisition and analysis systems	106603L6 Research, standardise, and plan manufacturing process for die casting and casting products, to ensure all indicators include cost control, environmental protection, product functionality, and appearance etc. meet the standards	6	5
			106584L5 Design and plan manufacturing process for metal extrusion products to ensure standards are met in terms of cost control, environmental protection, product functionality, and appearance, etc.	5	4
			111564L5 Develop and formulate intelligent processing and testing procedures, methods, and equipment for metal die casting, casting and extrusion products, and upgrade them to machine networking and data-driven operation	5	6
		Define critical product process parameters requiring monitoring and analysis for metal die casting, casting and	111557L6 Analyse application areas of “Industry 4.0”, helps enterprise to conduct data-driven and intelligent operations in appropriate areas and continuously improve efficiency	6	5

		extrusion products, establish digitised operational procedures and performance indicators, lead process optimisation initiatives based on analytical results	111555L5 Implement “Industry 4.0” digital operations and performance management, establish digital dashboards as needed, develop enterprise digital key performance indicators	5	6
			111549L4 Establish and apply “Industry 4.0” enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			106495L4 Identify and configure the required product quality control equipment, align with daily quality monitoring needs, and ensure product consistency and process reliability	4	3
		Integrate data from key enterprise processes to enable real-time and comprehensive information access; consolidate and leverage diverse systems, include customer relationship management (CRM), product data management (PDM), supplier collaboration management (SCM), product lifecycle management (PLM), and computer-aided design (CAD), to aggregate and analyse dispersed information, supporting management in evidence-based decision-making, fully integrate enterprise resource planning (ERP) with manufacturing execution systems (MES) to track and record the entire process from raw materials to finished products	111552L5 Implement “Industry 4.0” vertical and horizontal integration and connecting various departments and levels within enterprise to achieve data interconnection and interoperability, comprehensive digital transformation can be realised	5	6
			106505L5 Formulate material requirements planning (MRP) plan based on delivery dates required by each material supplier to ensure timely delivery of materials and semi-finished products for production	5	3
			111547L3 Implement cybersecurity for “Industry 4.0”, promote network and information security control measures that simultaneously enable information exchange and ensure information system security in Industry 4.0	3	6
		Develop and maintain industrial IoT-related network communication technology systems for the enterprise; apply IoT technologies to enable machines to interact and communicate with other machines, objects, environments, and infrastructure	111550L4 Apply “Industry 4.0” implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
			106565L5 Establish and maintain market information management system to monitor real-time market conditions, and adjust and optimise market strategies accordingly	5	3
			106498L4 Apply programmable logic controllers (PLC) to write circuit control programs, meet functional operation requirements of intelligent production lines, and fulfill data transmission needs	4	4
			106494L4 Select and develop required manufacturing machinery and peripheral equipment, understand structure, types, operation, functions, and applications, and minimise the fault probability of intelligent production lines	4	3

		106497L4 Apply pneumatic, hydraulic, and electrical devices to develop automated systems, ensure the safe operation of automated systems, enhance production efficiency and effectiveness, reduce labour requirements, and lower operational costs	4	4
		106496L5 Formulate maintenance plans and operating procedures for various mechanical and peripheral equipment, monitor operational status to ensure all machines receive appropriate maintenance and prevent unplanned downtime	5	4
Minimum 7 years of functional area relevant experience is recommended Minimum 2 years of metal die casting, casting and extrusion process engineer, process data analyst / engineer, automation engineer or equivalent experience; or 4 years of internet of things assistant engineer or equivalent experience is recommended				

Functional Area	Process Design and Development				
Job Position	Process Engineer (Metal Die casting, casting and extrusion Industry)				
Job Description	Comprehend and plan the diverse manufacturing processes for metal stamping and sheet metal products				
Core Competency Level and Credit (for reference)	Level 5 (20 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Code
	Core Competency	Design and plan manufacturing processes for casting products across various forms and types	106603L6 Research, standardise, and plan manufacturing process for die casting and casting products, to ensure all indicators include cost control, environmental protection, product functionality, and appearance etc. meet the standards	6	5
			106584L5 Design and plan manufacturing process for metal extrusion products to ensure standards are met in terms of cost control, environmental protection, product functionality, and appearance, etc.	5	4
		Optimise process sequences and production layouts to enhance process efficiency, and conduct real-time analysis of process parameters and manufacturing data	106500L5 Develop lean manufacturing and flexible manufacturing processes, layouts, and facilities, analyse flexible manufacturing requirements, select equipment, and achieve flexible manufacturing goals	5	6
			111551L4 To implement and apply “Industry 4.0”, understand the scope, departments, necessary tools and facilities for Industry 4.0 implementation, and identify the various data on the dashboard for monitoring and preliminary analysis	4	5
	Additional Competency	Conduct design analysis of manufacturing processes for metal die casting, casting and extrusion products	106424L3 Conduct marking processing to metal products to meet application requirements	3	3
			106439L3 Apply basic metal material knowledge, to select material in suitable types and specifications for metal products to achieve required functionality	3	3
		Optimise process parameters and resolve process-related problems	106518L4 Perform metal die casting and casting processes, master various processing parameters to enhance quality and resolve production issues	4	4
			106519L3 Perform metal extrusion, master various machining parameters, to improve quality of metal extrusion, and solve production problems	3	3
Minimum 7 years of functional area relevant experience is recommended					
Minimum 2 years of metal die casting, casting and extrusion process assistant engineer or equivalent experience is recommended					

Functional Area	Process Design and Development				
Job Position	Process Assistant Engineer (Metal Die casting, casting and extrusion Industry)				
Job Description	Analyse and improve the manufacturing processes of metal die casting, casting, and extrusion products, select suitable materials for product manufacturing, and optimise process parameters, ensure smooth and efficient production				
Core Competency Level and Credit (for reference)	Level 4 (24 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code		Level
	Core Competency	Design and analyse the manufacturing processes of metal die casting, casting, and extrusion products	106500L5 Develop lean manufacturing and flexible manufacturing processes, layouts, and facilities; analyse flexible manufacturing requirements; select equipment; and achieve flexible manufacturing goals	5	6
			106520L4 Perform metal heat treatment and surface modification, meet product application requirements	4	3
			106439L3 Apply basic metal material knowledge, to select material in suitable types and specifications for metal products to achieve required functionality	3	3
		Optimise process parameters and resolve production issues	106518L4 Perform metal die casting and casting processes, master various processing parameters to enhance quality and resolve production issues	4	4
			106519L3 Perform metal extrusion, master various machining parameters, to improve quality of metal extrusion, and solve production problems	3	3
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Perform surface treatment on metal die casting, casting, and extrusion products and collect real time manufacturing data	106420L3 Perform mechanical surface treatment to metal products to meet application requirements	4	3
			106424L3 Conduct marking processing to metal products to meet application requirements	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
Minimum 6 years of functional area relevant experience is recommended					
Minimum 2 years of metal die casting, casting and extrusion production department - technician or equivalent experience is recommended					

Functional Area	Process Design and Development				
Job Position	Production Department - Technician (Metal Die casting, casting and extrusion Industry)				
Job Description	Independently calibrate and operate equipment, perform metal die casting, casting, and extrusion processing, as well as various secondary machining processes, assist in testing and recording the efficiency and effectiveness of each process, and provide process control and improvement recommendations to superiors				
Core Competency Level and Credit (for reference)	Level 3 (25 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Adjust equipment, perform metal die casting, casting, and extrusion, resolve production issues, and collect real time manufacturing data	106518L4 Perform metal die casting and casting processes, master various processing parameters to enhance quality and resolve production issues	4	4
			106519L3 Perform metal extrusion, master various machining parameters, to improve quality of metal extrusion, and solve production problems	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
		Carry out secondary processing and surface treatment of metal die casting, casting, and extrusion products for quality improvement	106419L3 Perform secondary processing of metal die-casting and casting components to meet product application requirements	3	3
			106520L4 Perform metal heat treatment and surface modification, meet product application requirements	4	3
			106420L3 Perform mechanical surface treatment to metal products to meet application requirements	3	3
			106424L3 Conduct marking processing to metal products to meet application requirements	3	3
			106439L3 Apply basic metal material knowledge, to select material in suitable types and specifications for metal products to achieve required functionality	3	3
	Additional Competen	Execute occupational safety and health operations and implement environmentally friendly production	106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2	3
Minimum 5 years of functional area relevant experience is recommended					
Minimum 2 years of metal die casting, casting and extrusion senior technician or equivalent experience is recommended					

Functional Area	Process Design and Development				
Job Position	Process Data Analyst / Engineer (Metal Die casting, casting and extrusion Industry)				
Job Description	Integrate process parameters for metal die casting, casting and extrusion products, propose comprehensive recommendations for rectifying and redesigning the entire manufacturing process as well as developing new processes, establish and update performance indicators, conduct ongoing performance management and continuous optimisation				
Core Competency Level and Credit (for reference)	Level 5 (42 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Implement digitisation and intelligent operations for metal metal die casting, casting and extrusion product processing, establish automated data acquisition and analysis systems	106603L6 Research, standardise, and plan manufacturing process for die casting and casting products, to ensure all indicators include cost control, environmental protection, product functionality, and appearance etc. meet the standards	6	5
			106586L6 Plan and set up automation systems to improve level of automated manufacturing in enterprises	6	5
			106584L5 Design and plan manufacturing process for metal extrusion products to ensure standards are met in terms of cost control, environmental protection, product functionality, and appearance, etc.	5	4
			111564L5 Develop and formulate intelligent processing and testing procedures, methods, and equipment for metal die casting, casting and extrusion products, and upgrade them to machine networking and data-driven operation	5	6
		Define critical product process parameters requiring monitoring and analysis for metal metal die casting, casting and extrusion products, establish digitised operational procedures and performance indicators, lead process optimisation initiatives based on analytical results	111557L6 Analyse application areas of “Industry 4.0”, helps enterprise to conduct data-driven and intelligent operations in appropriate areas and continuously improve efficiency	6	5
			111555L5 Implement “Industry 4.0” digital operations and performance management, establish digital dashboards as needed, develop enterprise digital key performance indicators	5	6
			111549L4 Establish and apply “Industry 4.0” enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			111551L4 Introduce and apply “Industry 4.0”, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5

Additional Competency	Integrate process data for metal metal die casting, casting and extrusion to achieve synergy between process data and design data, thereby accelerating the product development cycle	106415L3 Adjust and tune stamping equipment, perform various forms of stamping operations, resolve production-related problems and improve product quality	3	3
	Analyse process data of metal metal die casting, casting and extrusion , examine interrelationships among various process parameters, provide recommendations for optimised production processes. Manage enterprise process data for metal die casting, casting, and extrusion operations, and transform such data into enterprise standards and knowledge bases for these processing technologies	111550L4 Apply “Industry 4.0” implementation tools, include hardware and software, to collect and utilise data across various operational areas of the enterprise	4	5
Minimum 7 years of functional area relevant experience is recommended				
Minimum 2 years of metal die casting, casting and extrusion process data assistant analyst / engineer or equivalent experience is recommended				

Functional Area	Process Design and Development				
Job Position	Process Data Assistant Analyst / Engineer (Metal Die casting, casting and extrusion Industry)				
Job Description	Analyse process parameters of metal die casting, casting, and extrusion products, provide improvement recommendations based on data, and collaborate on product and process data to shorten product development cycles and optimise process efficiency				
Core Competency Level and Credit (for reference)	Level 4 (29 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Integrate process data of metal die casting, casting, and extrusion, achieve collaboration between process data and design data, accelerate product development cycles	111564L5 Develop and formulate intelligent processing and testing procedures, methods, and equipment for metal die casting, casting and extrusion products, and upgrade them to machine networking and data-driven operation	5	6
			106518L4 Perform metal die casting and casting processes, master various processing parameters to enhance quality and resolve production issues	4	4
			106519L3 Perform metal extrusion, master various machining parameters, to improve quality of metal extrusion, and solve production problems	3	3
		Analyse process data of metal die casting, casting, and extrusion products, identify the interrelationships between different process parameters, provide recommendations for optimising production processes, manage in-house process data and convert it into enterprise standards and knowledge for metal die casting, casting, and extrusion processes	111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Review real time production data, machine data, quality data, and environmental data from digital dashboards, analyse process bottlenecks in metal die casting, casting, and extrusion, and propose improvement solutions, evaluate the effectiveness of digital lean production	111560L3 Operate and maintain intelligent and automated processing and design equipment, systems and processes for die casting, casting and extrusion of metal products; collect and monitor process data for die casting, casting and extrusion products	3	3
			111559L3 Apply "Industry 4.0" digital lean principles and use real time data collected from relevant departments, initially identify wasteful processes or procedures throughout enterprise's value chain, enable focused operational improvements and lean practices within corresponding departments	3	6

		Monitor the collection and display of process data for anomalies, ensure normal equipment operation and data confidentiality	111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
Minimum 6 years of functional area relevant experience is recommended Minimum 2 years of metal die casting, casting and extrusion process data technician or equivalent experience is recommended					

Functional Area	Process Design and Development				
Job Position	Process Data Technician (Metal Die casting, casting and extrusion Industry)				
Job Description	Collect production, machine, quality, and environmental data from metal die casting, casting, and extrusion processes, ensure the accuracy of collected data, and monitor system network security				
Core Competency Level and Credit (for reference)	Level 3 (12 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code		Level
	Core Competency	Review real time production data, machine data, quality data, and environmental data from digital dashboards, analyse process bottlenecks in metal die casting, casting, and extrusion, and propose improvement solutions, evaluate the effectiveness of digital lean production	111560L3 Operate and maintain intelligent and automated processing and design equipment, systems and processes for die casting, casting and extrusion of metal products; collect and monitor process data for die casting, casting and extrusion products	3	3
			111559L3 Apply "Industry 4.0" digital lean principles and use real time data collected from relevant departments, initially identify wasteful processes or procedures throughout enterprise's value chain, enable focused operational improvements and lean practices within corresponding departments	3	6
		Monitor the collection and display of process data for anomalies, ensure normal equipment operation and data confidentiality	111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
Minimum 5 years of functional area relevant experience is recommended					

Functional Area	Process Design and Development				
Job Position	Automation Engineer (Metal Die casting, casting and extrusion Industry)				
Job Description	Develop and select equipment suitable for automation in metal die casting, casting and extrusion processing, plan processes, layouts, and facilities for lean production and flexible manufacturing				
Core Competency Level and Credit (for reference)	Level 5 (30 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Plan, improve, and maintain automated systems for metal metal die casting, casting and extrusion processing	106586L6 Plan and set up automation systems to improve level of automated manufacturing in enterprises	6	5
			106488L5 Develop and formulate automated processing procedures, methods, and equipment for stamping products to improve production efficiency, stability, and safety	5	4
			106496L5 Develop maintenance plans and operating procedures for all machinery and peripheral equipment, and monitor their operation to ensure all machines within enterprise receive proper maintenance and avoid unexpected production downtime	5	4
			106500L5 Develop lean manufacturing and flexible manufacturing processes, layouts, and facilities, analyse flexible manufacturing requirements; select equipment, and achieve flexible manufacturing goals	5	6
			111551L4 Introduce and apply “Industry 4.0”, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Select required automated production equipment, quality monitoring machinery, and ancillary devices	106494L4 Select and develop required manufacturing machinery and peripheral equipment, understand structure, types, operation, functions, and applications, and minimise the fault probability of intelligent production lines	4	3
			106495L4 Identify and configure the required product quality control equipment, align with daily quality monitoring needs, and ensure product consistency and process reliability	4	3
	Additional Competency	Establish automated processing and inspection systems	106497L4 Apply pneumatic, hydraulic, and electrical devices to develop automated systems, ensure the safe operation of automated systems, enhance production efficiency and effectiveness, reduce labour requirements, and lower operational costs	4	4
			106499L4 Apply multi-axis robotic arms to develop automated systems, improve efficiency and flexibility of intelligent production lines	4	4

			106498L4	4	4
			Apply programmable logic controllers (PLC) to write circuit control programs, meet functional operation requirements of intelligent production lines, and fulfil data transmission needs		
			106396L3		
			Install and apply fixtures to improve production stability and efficiency	3	3
Minimum 7 years of functional area relevant experience is recommended					
Minimum 2 years of metal die casting, casting and extrusion automation assistant engineer or equivalent experience is recommended					

Functional Area	Process Design and Development				
Job Position	Automation Assistant Engineer (Metal Die casting, casting and extrusion Industry)				
Job Description	Select appropriate machines to produce metal die casting, casting, and extrusion products based on the manufacturing process, develop automation systems, ensure smooth and efficient production processes				
Core Competency Level and Credit (for reference)	Level 4 (28 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Define automation processing and inspection processes, as well as maintenance plans for metal die casting, casting, and extrusion products	106490L5 Develop and formulate automated processing procedures, methods, and equipment for die casting, casting and extrusion products to improve production efficiency, stability, and safety	5	4
			106496L5 Develop maintenance plans and operating procedures for all machinery and peripheral equipment, and monitor their operation to ensure all machines within enterprise receive proper maintenance and avoid unexpected production downtime	5	4
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Establish automation processing and inspection systems	106497L4 Apply pneumatic, hydraulic, and electrical devices to develop automated systems, ensure the safe operation of automated systems, enhance production efficiency and effectiveness, reduce labour requirements, and lower operational costs	4	4
			106499L4 Apply multi-axis robotic arms to develop automated systems, improve efficiency and flexibility of intelligent production lines	4	4
			106498L4 Apply programmable logic controllers (PLC) to write circuit control programs, meet functional operation requirements of intelligent production lines, and fulfill data transmission needs	4	4
			106396L3 Install and apply fixtures to improve production stability and efficiency	3	3
	Additional Competency	Install fixtures, set up, commission, and maintain various manufacturing machines, intelligent production systems, and peripheral equipment, and collect production data in real time	106395L3 Install, debug, and maintain various manufacturing machinery, intelligent production systems, peripheral equipment to ensure they are in normal working order and meet production requirements	3	4
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3

	Minimum 6 years of functional area relevant experience is recommended Minimum 2 years of metal die casting, casting and extrusion automation technician or equivalent experience is recommended
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Functional Area	Process Design and Development				
Job Position	Automation Technician (Metal Die casting, casting and extrusion Industry)				
Job Description	Install, improve, commission, and maintain various manufacturing machines and peripheral equipment within the enterprise				
Core Competency Level and Credit (for reference)	Level 3 (10 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Install fixtures, set up, commission, and maintain various manufacturing machines, intelligent production systems, and peripheral equipment, and collect production data in real time	106395L3 Install, debug, and maintain various manufacturing machinery, intelligent production systems, peripheral equipment to ensure they are in normal working order and meet production requirements	3	4
			106396L3 Install and apply fixtures to improve production stability and efficiency	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
	Additional Competen	Execute occupational safety and health operations and implement environmentally friendly production	106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2	3
Minimum 5 years of functional area relevant experience is recommended					

Functional Area	Process Design and Development				
Job Position	Internet of Things Assistant Engineer (Tooling, Metals and Plastics Industry)				
Job Description	Establish interconnected system for machines, instruments, computers, and environmental monitoring within the production process, and integrate the data into design, process, product lifecycle management and analysis software systems				
Core Competency Level and Credit (for reference)	Level 4 (43 credits)				
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency		
			Code	Level	Credit
		Integrate key process data within the enterprise to assist in real time and comprehensive information management, consolidate and utilise various systems (include Customer relationship management (CRM), product data management (PDM), supply chain management (SCM), product lifecycle management (PLM), and computer-aided design (CAD)) to aggregate and analyse dispersed information, supporting management in making intelligent decisions, and fully integrate Enterprise resource planning (ERP) with manufacturing execution system (MES) to track and record the entire process from raw materials to finished products	111552L5 Implement “Industry 4.0” vertical and horizontal integration and connecting various departments and levels within enterprise to achieve data interconnection and interoperability, comprehensive digital transformation can be realised	5	6
			106505L5 Formulate material requirements planning (MRP) plan based on delivery dates required by each material supplier to ensure timely delivery of materials and semi-finished products for production	5	3
			111547L3 Implement cybersecurity for Industry 4.0, promote network and information security control measures that simultaneously enable information exchange and ensure information system security in Industry 4.0	3	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
			111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
			106565L5 Establish and maintain market information management system to monitor real time market conditions, and adjust and optimise market strategies accordingly	5	3
			106498L4 Apply programmable logic controllers (PLC) to write circuit control programs, meet functional operation requirements of intelligent production lines, and fulfill data transmission needs	4	4
			106494L4 Select and develop required manufacturing machinery and peripheral equipment, understand structure, types, operation, functions, and applications, and minimise the fault probability of intelligent production lines	4	3
		Develop and maintain industrial Internet of Things (IoT) network communication technology systems for the enterprise, and apply IoT technology to enable machines to interact and communicate with other machines, objects, environments, and infrastructure			

			106497L4 Apply pneumatic, hydraulic, and electrical devices to develop automated systems, ensure the safe operation of automated systems, enhance production efficiency and effectiveness, reduce labour requirements, and lower operational costs	4	4
			106496L5 Develop maintenance plans and operating procedures for all machinery and peripheral equipment, and monitor their operation to ensure all machines within enterprise receive proper maintenance and avoid unexpected production downtime	5	4
	Additional Competency	Install, monitor, and maintain industrial IoT systems, connecting various machines, equipment, and systems, collect required production data	106395L3 Install, debug, and maintain various manufacturing machinery, intelligent production systems, peripheral equipment to ensure they are in normal working order and meet production requirements	3	4
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
	Minimum 6 years of functional area relevant experience is recommended Minimum 2 years of internet of things technician or equivalent experience is recommended				

Functional Area	Process Design and Development				
Job Position	Internet of Things Technician (Tooling, Metals and Plastics Industry)				
Job Description	Install, monitor, and maintain IoT devices and systems that connect design and production machines, instruments, and environmental monitoring facilities, and ensure the cybersecurity of the production network				
Core Competency Level and Credit (for reference)	Level 3 (18 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code		Level
	Core Competency	Install, monitor, and maintain industrial IoT systems, connecting various machines, equipment, and systems, collect required production data	111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
			106395L3 Install, debug, and maintain various manufacturing machinery, intelligent production systems, peripheral equipment to ensure they are in normal working order and meet production requirements	3	4
			111547L3 Implement cybersecurity for Industry 4.0, promote network and information security control measures that simultaneously enable information exchange and ensure information system security in Industry 4.0	3	6
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
	Minimum 5 years of functional area relevant experience is recommended				

Branches **Metal Stamping and Sheet Metal Industry**

Functional area **Process Design and Development**

Role

QF
Level

Level 6

**Engineering/Production
Director //
Engineering/Production
General Manager**

**Engineering
Manager**

Level 5

Process Engineer

**Process Data
Analysis
Engineer**

**Automation
Engineer**

Level 4

**Process Assistant
Engineer**

**Process Data
Analysis Assistant
Engineer**

**Automation
Assistant
Engineer**

**Internet of
Things Assistant
Engineer**

Level 3

**Production
Department -
Technician**

**Process Data
Technician**

**Automation
Technician**

**Internet of
Things
Technician**

Functional Area	Process Design and Development				
Job Position	Engineering / Production Director // Engineering / Production General Manager (Metal Stamping and Sheet Metal Industry)				
Job Description	Strategise the design of metal stamping products and refine associated process and production techniques to optimise production, enhance product functionality, and reduce costs. Anticipate future enterprise requirements for equipment, technologies, and systems. Promote digitalised operations across design, process, and production domains				
Core Competency Level and Credit (for reference)	Level 6 (64 credits)				
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency		
			Code	Level	Credit
		Formulate strategic plans for the design, process development, project management, and production technology advancement of metal stamping and sheet metal products, manage and optimise operations, implement automation initiatives to enhance design and production efficiency	106605L6 Formulate enterprise development strategies, consider cultural conditions of both domestic and international markets and results of competitive analysis, and formulate medium-and long-term development goals and measures for enterprise	6	4
			106601L6 Develop risk management strategies to reduce and avoid risks based on the enterprise's long-term development goals and actual operating conditions	6	4
			106604L6 Establish and maintain quality management system to enhance competitiveness and positive image of enterprise through quality management	6	6
			106603L6 Research, standardise, and plan manufacturing process for die casting and casting products, to ensure all indicators include cost control, environmental protection, product functionality, and appearance etc. meet the standards	6	5
			106582L6 Manage product development knowledge and continuously improve product design quality and efficiency	6	3
			106548L5 Develop project management strategies to ensure projects are implemented with appropriate resources and completed in timely and effective manner	5	4
			106586L6 Plan and set up automation systems to improve level of automated manufacturing in enterprises	6	5
			106561L5 Continuously improve factory environment and promote factory quality management, optimise occupational health and safety management, and improve production and operational efficiency	5	5
			111556L6 Establish “Industry 4.0” architecture to interconnect devices within enterprise, achieve single data source, uncover useful data, and assist enterprise in digital transformation and comprehensive operational improvements	6	6
		Establish digital data management system based on “Industry 4.0” in the domains of product design, process development, and production, analyse			

		applicable data domains, integrate data sources, and enhance the effectiveness of product design, process development, and production operations	111557L6 Analyse application areas of “Industry 4.0”, helps enterprise to conduct data-driven and intelligent operations in appropriate areas and continuously improve efficiency	6	5
			111552L5 Implement “Industry 4.0” vertical and horizontal integration and connecting various departments and levels within enterprise to achieve data interconnection and interoperability, comprehensive digital transformation can be realised	5	6
			106587L5 Manage process design knowledge, standardise it, and continuously improve the process	5	6
			111551L4 To implement and apply “Industry 4.0”, understand the scope, departments, necessary tools and facilities for “Industry 4.0” implementation, and identify the various data on the dashboard for monitoring and preliminary analysis	4	5
	Additional Competency	Plan product design and development, encompassing concept formulation, environmental considerations, life cycle assessment, and intellectual property protection	106560L5 Conduct environmentally conscious product design and life cycle management to continuously minimise the environmental impact of products throughout manufacturing, use, and end-of-life disposal	5	6
			106574L5 Perform conceptual product design and engineering integration, balancing customer requirements, market trends, and internal constraints on human, machine, and material resources	5	3
			106581L5 Execute design registration, confidentiality measures, and review processes to safeguard enterprise intellectual property	5	3
		Establish product design and development system enabling concurrent development of individual product components while continuously improving product development efficiency	106575L5 Apply and monitor product data management and engineering change control systems to facilitate concurrent development and design of different product components	5	4
		Formulate project management strategies, assess risks, and implement digitised project management practices	106580L5 Conduct risk management for product development projects, formulate effective contingency and emergency response measures	5	3
		Manage factory operations, supervise and monitor production equipment to improve product quality, manage workplace risks to enhance the factory environment, and digitise risk data	106458L5 Execute workshop management to enhance production efficiency and monitor production schedules to ensure timely completion	4	4
			106460L4 Monitor and supervise the operation and maintenance of production equipment to reduce failure rates and ensure reliable equipment performance	5	3
			106562L5	5	5

			Implement workplace risk management to protect the safety of employees and customers, and to reduce enterprise operational and financial risks		
Minimum 10 years of functional area relevant experience is recommended Minimum 5 years of metal stamping and sheet metal engineering manager or equivalent experience is recommended					

Functional Area	Process Design and Development				
Job Position	Engineering Manager (Metal Stamping and Sheet Metal Industry)				
Job Description	Plan the manufacturing processes and automation systems for metal products, manage and continuously improve the knowledge base for metal product process design				
Core Competency Level and Credit (for reference)	Level 5 (16 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Code
	Core Competency	Plan and configure automation systems	106586L6 Plan and set up automation systems to improve level of automated manufacturing in enterprises	6	5
		Manage and continuously improve process design knowledge	106587L5 Manage process design knowledge, standardise it, and continuously improve the process	5	6
		Introduce and apply “Industry 4.0” principles, understand the applicable domains, departments, essential tools, and facilities for Industry 4.0, implementation, identify various data items displayed on dashboards, and perform monitoring and preliminary analysis	111551L4 Introduce and apply “Industry 4.0”, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Design and plan manufacturing processes for metal stamping and sheet metal products across various forms and production methods	106602L5 Design and plan manufacturing process for metal stamping products to ensure the standards are met in terms of cost control, environmental protection, product functionality, and appearance	5	6
			106489L5 Establish methods and processes for flexible small-batch manufacture of sheet metal, pipes, and wire components, select appropriate processing equipment, and master various processing parameters to improve quality of small-batch production of sheet metal, pipes, and wire components	5	4
		Implement digitisation and intelligent operations for metal stamping product processing, establish automated data acquisition and analysis systems	111565L5 Develop and formulate intelligent processing and inspection procedures, methods, and equipment for metal stamping and sheet metal products, and upgrade them to machine networking and data-driven operation	5	6
		Define critical product process parameters requiring monitoring and analysis for metal stamping products, establish digitised operational procedures and performance indicators, lead process optimisation initiatives based on analytical results	111557L6 Analyse application areas of “Industry 4.0”, helps enterprise to conduct data-driven and intelligent operations in appropriate areas and continuously improve efficiency	6	5
			111555L5 Implement “Industry 4.0” digital operations and performance management, establish digital dashboards as needed, develop enterprise digital key performance indicators	5	6

			111549L4 Establish and apply “Industry 4.0” enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
		Plan, improve, and maintain automation systems for metal stamping and sheet metal processing	106488L5 Develop and formulate automated processing procedures, methods, and equipment for stamping products to improve production efficiency, stability, and safety	5	4
			106496L5 Develop maintenance plans and operating procedures for all machinery and peripheral equipment, and monitor their operation to ensure all machines within enterprise receive proper maintenance and avoid unexpected production downtime	5	4
			106500L5 Develop lean manufacturing and flexible manufacturing processes, layouts, and facilities; analyse flexible manufacturing requirements; select equipment; and achieve flexible manufacturing goals	5	6
		Select required automated production equipment, quality monitoring machinery, and ancillary devices	106494L4 Select and develop required manufacturing machinery and peripheral equipment, understand structure, types, operation, functions, and applications, and minimise the fault probability of intelligent production lines	4	3
			106495L4 Identify and configure the required product quality control equipment, align with daily quality monitoring needs, and ensure product consistency and process reliability	4	3
		Integrate data from key enterprise processes to enable real-time and comprehensive information access; consolidate and leverage diverse systems, include customer relationship management (CRM), product data management (PDM), supplier collaboration management (SCM), product lifecycle management (PLM), and computer-aided design (CAD), to aggregate and analyse dispersed information, supporting management in evidence-based decision-making, fully integrate enterprise resource planning (ERP) with manufacturing execution systems (MES) to track and record the entire process from raw materials to finished products	111552L5 Implement “Industry 4.0” vertical and horizontal integration and connecting various departments and levels within enterprise to achieve data interconnection and interoperability, comprehensive digital transformation can be realised	5	6
			106505L5 Formulate material requirements planning (MRP) plan based on delivery dates required by each material supplier to ensure timely delivery of materials and semi-finished products for production	5	3
			111547L3 Implement cybersecurity for “Industry 4.0”, promote network and information security control measures that simultaneously enable information exchange and ensure information system security in Industry 4.0	3	6

	Develop and maintain industrial IoT-related network communication technology systems for the enterprise; apply IoT technologies to enable machines to interact and communicate with other machines, objects, environments, and infrastructure	111550L4 Apply “Industry 4.0” implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
		106565L5 Establish and maintain market information management system to monitor real-time market conditions, and adjust and optimise market strategies accordingly	5	3
		106498L4 Apply programmable logic controllers (PLC) to write circuit control programs, meet functional operation requirements of intelligent production lines, and fulfill data transmission needs	4	4
		106494L4 Select and develop required manufacturing machinery and peripheral equipment, understand structure, types, operation, functions, and applications, and minimise the fault probability of intelligent production lines	4	3
		106497L4 Apply pneumatic, hydraulic, and electrical devices to develop automated systems, ensure the safe operation of automated systems, enhance production efficiency and effectiveness, reduce labour requirements, and lower operational costs	4	4
		106496L5 Formulate maintenance plans and operating procedures for various mechanical and peripheral equipment, monitor operational status to ensure all machines receive appropriate maintenance and prevent unplanned downtime	5	4
		Minimum 7 years of functional area relevant experience is recommended Minimum 2 years of metal stamping and sheet metal process engineer, process data analyst / engineer, automation engineer or equivalent experience; or 4 years of internet of things assistant engineer or equivalent experience is recommended		

Functional Area	Process Design and Development				
Job Position	Process Engineer (Metal Stamping and Sheet Metal Industry)				
Job Description	Comprehend and plan the diverse manufacturing processes for metal stamping and sheet metal products				
Core Competency Level and Credit (for reference)	Level 5 (21 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Code
	Core Competency	Design and plan manufacturing processes for stamping and sheet metal products across various forms and types	106602L5 Design and plan manufacturing process for metal stamping products to ensure the standards are met in terms of cost control, environmental protection, product functionality, and appearance	5	6
			106489L5 Establish methods and processes for flexible small-batch manufacture of sheet metal, pipes, and wire components, select appropriate processing equipment, and master various processing parameters to improve quality of small-batch production of sheet metal, pipes, and wire components	5	4
		Optimise process sequences and production layouts to enhance process efficiency, and conduct real-time analysis of process parameters and manufacturing data	106500L5 Develop lean manufacturing and flexible manufacturing processes, layouts, and facilities, analyse flexible manufacturing requirements, select equipment, and achieve flexible manufacturing goals	5	6
			111551L4 To implement and apply “Industry 4.0”, understand the scope, departments, necessary tools and facilities for Industry 4.0 implementation, and identify the various data on the dashboard for monitoring and preliminary analysis	4	5
	Additional Competency	Conduct design analysis of manufacturing processes for metal stamping and sheet metal products	106516L4 Perform non-traditional and special sheet metal processing, meet product application requirements	4	3
			106517L4 Perform stamping processing of new sheet metal and alloy materials, master various processing parameters, enhance stamping quality, and resolve production issues	4	3
			106520L4 Perform metal heat treatment and surface modification, meet product application requirements	4	3
			106439L3 Apply basic metal material knowledge, to select material in suitable types and specifications for metal products to achieve required functionality	3	4
		Optimise process parameters and resolve process-related problems	106415L3 Adjust stamping equipment, perform various forms of stamping processes, resolve production problems, and improve product quality	3	3
Minimum 7 years of functional area relevant experience is recommended					
Minimum 2 years of metal stamping and sheet metal process assistant engineer or equivalent experience is recommended					

Functional Area	Process Design and Development				
Job Position	Process Assistant Engineer (Metal Stamping and Sheet Metal Industry)				
Job Description	Analyse and improve the manufacturing processes of metal stamping and sheet metal products, select suitable materials for product manufacturing, and optimise process parameters to ensure smooth and efficient production				
Core Competency Level and Credit (for reference)	Level 4 (30 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Design and analyse the manufacturing processes of metal stamping and sheet metal products	106489L5 Establish methods and processes for flexible small-batch manufacture of sheet metal, pipes, and wire components, select appropriate processing equipment, and master various processing parameters to improve quality of small-batch production of sheet metal, pipes, and wire components	5	4
			106500L5 Develop lean manufacturing and flexible manufacturing processes, layouts, and facilities; analyse flexible manufacturing requirements; select equipment; and achieve flexible manufacturing goals	5	6
			106516L4 Perform non-traditional and special sheet metal processing, meet product application requirements	4	3
			106517L4 Perform stamping processing of new sheet metal and alloy materials, master various processing parameters, enhance stamping quality, and resolve production issues	4	3
			106520L4 Perform metal heat treatment and surface modification, meet product application requirements	4	3
			106439L3 Apply basic metal material knowledge, to select material in suitable types and specifications for metal products to achieve required functionality	3	3
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
			106415 L3 Adjust stamping equipment, perform various forms of stamping processes, resolve production problems, and improve product quality	3	3
	Additional	Perform secondary processing, surface treatment, and quality improvement on metal stamping and sheet metal products	106416L3 Perform metal pipe and wire forming to meet product application requirements	3	3
			106417L3	3	3

			Perform sheet metal continuous / transfer stamping to meet product application requirements		
			106418L3 Perform secondary processing of metal stamping and sheet metal parts to meet product application requirements	3	3
			106420L3 Perform mechanical surface treatment to metal products to meet application requirements	3	3
			106424L3 Conduct marking processing to metal products to meet application requirements	3	3
			Minimum 6 years of functional area relevant experience is recommended		
	Minimum 2 years of metal stamping and sheet metal production department - technician or equivalent experience is recommended				

Functional Area	Process Design and Development				
Job Position	Production Department - Technician (Metal Stamping and Sheet Metal Industry)				
Job Description	Independently calibrate and operate equipment, perform metal stamping processing and various secondary machining processes, assist in testing and recording the efficiency and effectiveness of each process, and provide process control and improvement recommendations to superiors				
Core Competency Level and Credit (for reference)	Level 3 (33 credits)				
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency		
			Code	Level	Credit
		Adjust equipment, perform various types of stamping processing and resolve production issues, and collect real time manufacturing data	106415L3 Adjust stamping equipment, perform various forms of stamping processes, resolve production problems, and improve product quality	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
		Carry out secondary processing and surface treatment of metal stamping and sheet metal products for quality improvement	106416L3 Perform metal pipe and wire forming to meet product application requirements	3	3
			106417L3 Perform sheet metal continuous / transfer stamping to meet product application requirements	3	3
			106516L4 Perform non-traditional and special sheet metal processing, meet product application requirements	4	3
			106517L4 Perform stamping processing of new sheet metal and alloy materials, master various processing parameters, enhance stamping quality, and resolve production issues	4	3
			106418L3 Perform secondary processing of metal stamping and sheet metal parts to meet product application requirements	3	3
			106520L4 Perform metal heat treatment and surface modification, meet product application requirements	4	3
			106420L3 Perform mechanical surface treatment to metal products to meet application requirements	3	3
			106424L3 Conduct marking processing to metal products to meet application requirements	3	3
			106439L3 Apply basic metal material knowledge, to select material in suitable types and specifications for metal products to achieve required functionality	3	3

	Additional Competency	Execute occupational safety and health operations and implement environmentally friendly production	106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2	3
Minimum 5 years of functional area relevant experience is recommended					
Minimum 2 years of metal stamping and sheet metal senior technician or equivalent experience is recommended					

Functional Area	Process Design and Development				
Job Position	Process Data Analyst / Engineer (Metal Stamping and Sheet Metal Industry)				
Job Description	Integrate process parameters for metal stamping products, propose comprehensive recommendations for rectifying and redesigning the entire manufacturing process as well as developing new processes, establish and update performance indicators, conduct ongoing performance management and continuous optimisation				
Core Competency Level and Credit (for reference)	Level 5 (39 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Implement digitisation and intelligent operations for metal stamping product processing, establish automated data acquisition and analysis systems	106586L6 Plan and set up automation systems to improve level of automated manufacturing in enterprises	6	5
			106602L5 Design and plan manufacturing process for metal stamping products to ensure the standards are met in terms of cost control, environmental protection, product functionality, and appearance	5	6
			111565L5 Develop and formulate intelligent processing and inspection procedures, methods, and equipment for metal stamping and sheet metal products, and upgrade them to machine networking and data-driven operation	5	6
		Define critical product process parameters requiring monitoring and analysis for metal stamping products, establish digitised operational procedures and performance indicators, lead process optimisation initiatives based on analytical results	111557L6 Analyse application areas of “Industry 4.0”, helps enterprise to conduct data-driven and intelligent operations in appropriate areas and continuously improve efficiency	6	5
			111555L5 Implement “Industry 4.0” digital operations and performance management, establish digital dashboards as needed, develop enterprise digital key performance indicators	5	6
			111549L4 Establish and apply “Industry 4.0” enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			111551L4 Introduce and apply “Industry 4.0”, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Integrate process data for metal stamping and sheet metal to achieve synergy between process data and design data, thereby accelerating the product development cycle	106415L3 Adjust and tune stamping equipment, perform various forms of stamping operations, resolve production-related problems and improve product quality	3	3

		Analyse process data of metal stamping and sheet metal, examine interrelationships among various process parameters, provide recommendations for optimised production processes. Manage enterprise process data for metal die casting, casting, and extrusion operations, and transform such data into enterprise standards and knowledge bases for these processing technologies	111550L4 Apply “Industry 4.0” implementation tools, include hardware and software, to collect and utilise data across various operational areas of the enterprise	4	5
Minimum 7 years of functional area relevant experience is recommended					
Minimum 2 years of metal stamping and sheet metal process data assistant analyst / engineer or equivalent experience is recommended					

Functional Area	Process Design and Development				
Job Position	Process Data Assistant Analyst / Engineer (Metal Stamping and Sheet Metal Industry)				
Job Description	Analyse process parameters of metal stamping and sheet metal products, provide improvement recommendations based on data, and collaborate on product and process data to shorten product development cycles and optimise process efficiency				
Core Competency Level and Credit (for reference)	Level 4 (25 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Integrate process data of metal stamping and sheet metal processing, achieve collaboration between process data and design data, accelerate product development cycles	111565L5 Develop and formulate intelligent processing and inspection procedures, methods, and equipment for metal stamping and sheet metal products, and upgrade them to machine networking and data-driven operation	5	6
			106415L3 Adjust stamping equipment, perform various forms of stamping processes, resolve production problems, and improve product quality	3	3
		Analyse process data of metal stamping and sheet metal processing, identify the interrelationships between different process parameters, provide recommendations for optimising production processes, manage in-house process data, and convert it into enterprise standards and knowledge for metal stamping and sheet metal processing	111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Review real time production data, machine data, quality data, and environmental data from digital dashboards, analyse process bottlenecks in metal stamping and sheet metal processing, and propose improvement solutions, evaluate the effectiveness of digital lean production	111561L3 Operate and maintain intelligent and automated equipment, systems, and processes for metal stamping and sheet metal product manufacturing, collect and monitor process data	3	3
			111559L3 Apply "Industry 4.0" digital lean principles and use real time data collected from relevant departments, initially identify wasteful processes or procedures throughout enterprise's value chain, enable focused operational improvements and lean practices within corresponding departments	3	6
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3

Minimum 6 years of functional area relevant experience is recommended
Minimum 2 years of metal stamping and sheet metal process data technician or equivalent experience is recommended

Functional Area	Process Design and Development				
Job Position	Process Data Technician (Metal Stamping and Sheet Metal Industry)				
Job Description	Collect production, machine, quality, and environmental data from metal stamping processes, ensure the accuracy of collected data, and monitor system network security				
Core Competency Level and Credit (for reference)	Level 3 (12 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code		Level
	Core Competency	Review real time production data, machine data, quality data, and environmental data from digital dashboards, analyse process bottlenecks in metal stamping and sheet metal processing, and propose improvement solutions, evaluate the effectiveness of digital lean production	111561L3 Operate and maintain intelligent and automated equipment, systems, and processes for metal stamping and sheet metal product manufacturing, collect and monitor process data	3	3
			111559L3 Apply "Industry 4.0" digital lean principles and use real time data collected from relevant departments, initially identify wasteful processes or procedures throughout enterprise's value chain, enable focused operational improvements and lean practices within corresponding departments	3	6
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
		Minimum 5 years of functional area relevant experience is recommended			

Functional Area	Process Design and Development				
Job Position	Automation Engineer (Metal Stamping and Sheet Metal Industry)				
Job Description	Develop and select equipment suitable for automation in metal stamping and sheet metal processing, plan processes, layouts, and facilities for lean production and flexible manufacturing				
Core Competency Level and Credit (for reference)	Level 5 (30 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Plan, improve, and maintain automated systems for metal stamping and sheet metal processing	106586L6		
			Plan and set up automation systems to improve level of automated manufacturing in enterprises	6	5
			106488L5		
			Develop and formulate automated processing procedures, methods, and equipment for stamping products to improve production efficiency, stability, and safety	5	4
			106496L5		
			Develop maintenance plans and operating procedures for all machinery and peripheral equipment, and monitor their operation to ensure all machines within enterprise receive proper maintenance and avoid unexpected production downtime	5	4
			106500L5		
			Develop lean manufacturing and flexible manufacturing processes, layouts, and facilities, analyse flexible manufacturing requirements; select equipment, and achieve flexible manufacturing goals	5	6
			111551L4		
			Introduce and apply “Industry 4.0”, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Select required automated production equipment, quality monitoring machinery, and ancillary devices	106494L4		
			Select and develop required manufacturing machinery and peripheral equipment, understand structure, types, operation, functions, and applications, and minimise the fault probability of intelligent production lines	4	3
			106495L4		
			Identify and configure the required product quality control equipment, align with daily quality monitoring needs, and ensure product consistency and process reliability	4	3
	Additional Competency	Establish automated processing and inspection systems	106497L4		
			Apply pneumatic, hydraulic, and electrical devices to develop automated systems, ensure the safe operation of automated systems, enhance production efficiency and effectiveness, reduce labour requirements, and lower operational costs	4	4
			106499L4		
			Apply multi-axis robotic arms to develop automated systems, improve efficiency and flexibility of intelligent production lines	4	4

			106498L4	4	4
			Apply programmable logic controllers (PLC) to write circuit control programs, meet functional operation requirements of intelligent production lines, and fulfil data transmission needs		
			106396L3	3	3
			Install and apply fixtures to improve production stability and efficiency		
Minimum 7 years of functional area relevant experience is recommended					
Minimum 2 years of metal stamping and sheet metal automation assistant engineer or equivalent experience is recommended					

Functional Area	Process Design and Development				
Job Position	Automation Assistant Engineer (Metal Stamping and Sheet Metal Industry)				
Job Description	Select appropriate machines to produce metal stamping and sheet metal products based on the manufacturing process, develop automation systems, ensure smooth and efficient production processes				
Core Competency Level and Credit (for reference)	Level 4 (28 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Define automation processing and inspection processes, as well as maintenance plans for metal stamping and sheet metal products	106488L5 Develop and formulate automated processing procedures, methods, and equipment for stamping products to improve production efficiency, stability, and safety	5	4
			106496L5 Develop maintenance plans and operating procedures for all machinery and peripheral equipment, and monitor their operation to ensure all machines within enterprise receive proper maintenance and avoid unexpected production downtime	5	4
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Establish automation processing and inspection systems	106497L4 Apply pneumatic, hydraulic, and electrical devices to develop automated systems, ensure the safe operation of automated systems, enhance production efficiency and effectiveness, reduce labour requirements, and lower operational costs	4	4
			106498L4 Apply programmable logic controllers (PLC) to write circuit control programs, meet functional operation requirements of intelligent production lines, and fulfill data transmission needs	4	4
			106499L4 Apply multi-axis robotic arms to develop automated systems, improve efficiency and flexibility of intelligent production lines	4	4
			106396L3 Install and apply fixtures to improve production stability and efficiency	3	3
	Additional Competency	Install fixtures, set up, commission, and maintain various manufacturing machines, intelligent production systems, and peripheral equipment, and collect production data in real time	106395L3 Install, debug, and maintain various manufacturing machinery, intelligent production systems, peripheral equipment to ensure they are in normal working order and meet production requirements	3	4
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3

	Minimum 6 years of functional area relevant experience is recommended Minimum 2 years of metal stamping and sheet metal automation technician or equivalent experience is recommended
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Functional Area	Process Design and Development				
Job Position	Automation Technician (Metal Stamping and Sheet Metal Industry)				
Job Description	Install, improve, commission, and maintain various manufacturing machines and peripheral equipment within the enterprise				
Core Competency Level and Credit (for reference)	Level 3 (10 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Install fixtures, set up, commission, and maintain various manufacturing machines, intelligent production systems, and peripheral equipment, and collect production data in real time	106395L3 Install, debug, and maintain various manufacturing machinery, intelligent production systems, peripheral equipment to ensure they are in normal working order and meet production requirements	3	4
			106396L3 Install and apply fixtures to improve production stability and efficiency	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
	Additional Competen	Execute occupational safety and health operations and implement environmentally friendly production	106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2	3
Minimum 5 years of functional area relevant experience is recommended					

Functional Area	Process Design and Development				
Job Position	Internet of Things Assistant Engineer (Tooling, Metals and Plastics Industry)				
Job Description	Establish interconnected system for machines, instruments, computers, and environmental monitoring within the production process, and integrate the data into design, process, product lifecycle management and analysis software systems				
Core Competency Level and Credit (for reference)	Level 4 (43 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Integrate key process data within the enterprise to assist in real time and comprehensive information management, consolidate and utilise various systems (include Customer relationship management (CRM), product data management (PDM), supply chain management (SCM), product lifecycle management (PLM), and computer-aided design (CAD)) to aggregate and analyse dispersed information, supporting management in making intelligent decisions, and fully integrate Enterprise resource planning (ERP) with manufacturing execution system (MES) to track and record the entire process from raw materials to finished products	111552L5 Implement “Industry 4.0” vertical and horizontal integration and connecting various departments and levels within enterprise to achieve data interconnection and interoperability, comprehensive digital transformation can be realised	5	6
			106505L5 Formulate material requirements planning (MRP) plan based on delivery dates required by each material supplier to ensure timely delivery of materials and semi-finished products for production	5	3
			111547L3 Implement cybersecurity for Industry 4.0, promote network and information security control measures that simultaneously enable information exchange and ensure information system security in Industry 4.0	3	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Develop and maintain industrial Internet of Things (IoT) network communication technology systems for the enterprise, and apply IoT technology to enable machines to interact and communicate with other machines, objects, environments, and infrastructure	111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
			106565L5 Establish and maintain market information management system to monitor real time market conditions, and adjust and optimise market strategies accordingly	5	3
			106498L4 Apply programmable logic controllers (PLC) to write circuit control programs, meet functional operation requirements of intelligent production lines, and fulfill data transmission needs	4	4
			106494L4 Select and develop required manufacturing machinery and peripheral equipment, understand structure, types, operation, functions, and applications, and minimise the fault probability of intelligent production lines	4	3

			106497L4 Apply pneumatic, hydraulic, and electrical devices to develop automated systems, ensure the safe operation of automated systems, enhance production efficiency and effectiveness, reduce labour requirements, and lower operational costs	4	4
			106496L5 Develop maintenance plans and operating procedures for all machinery and peripheral equipment, and monitor their operation to ensure all machines within enterprise receive proper maintenance and avoid unexpected production downtime	5	4
	Additional Competency	Install, monitor, and maintain industrial IoT systems, connecting various machines, equipment, and systems, collect required production data	106395L3 Install, debug, and maintain various manufacturing machinery, intelligent production systems, peripheral equipment to ensure they are in normal working order and meet production requirements	3	4
			111547L3 Implement cybersecurity for Industry 4.0, promote network and information security control measures that simultaneously enable information exchange and ensure information system security in Industry 4.0	3	6
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
	Minimum 6 years of functional area relevant experience is recommended				
Minimum 2 years of internet of things technician or equivalent experience is recommended					

Functional Area	Process Design and Development				
Job Position	Internet of Things Technician (Tooling, Metals and Plastics Industry)				
Job Description	Install, monitor, and maintain IoT devices and systems that connect design and production machines, instruments, and environmental monitoring facilities, and ensure the cybersecurity of the production network				
Core Competency Level and Credit (for reference)	Level 3 (18 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code		Level
	Core Competency	Install, monitor, and maintain industrial IoT systems, connecting various machines, equipment, and systems, collect required production data	111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
			106395L3 Install, debug, and maintain various manufacturing machinery, intelligent production systems, peripheral equipment to ensure they are in normal working order and meet production requirements	3	4
			111547L3 Implement cybersecurity for Industry 4.0, promote network and information security control measures that simultaneously enable information exchange and ensure information system security in Industry 4.0	3	6
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
	Minimum 5 years of functional area relevant experience is recommended				

Branches

Plastics Industry

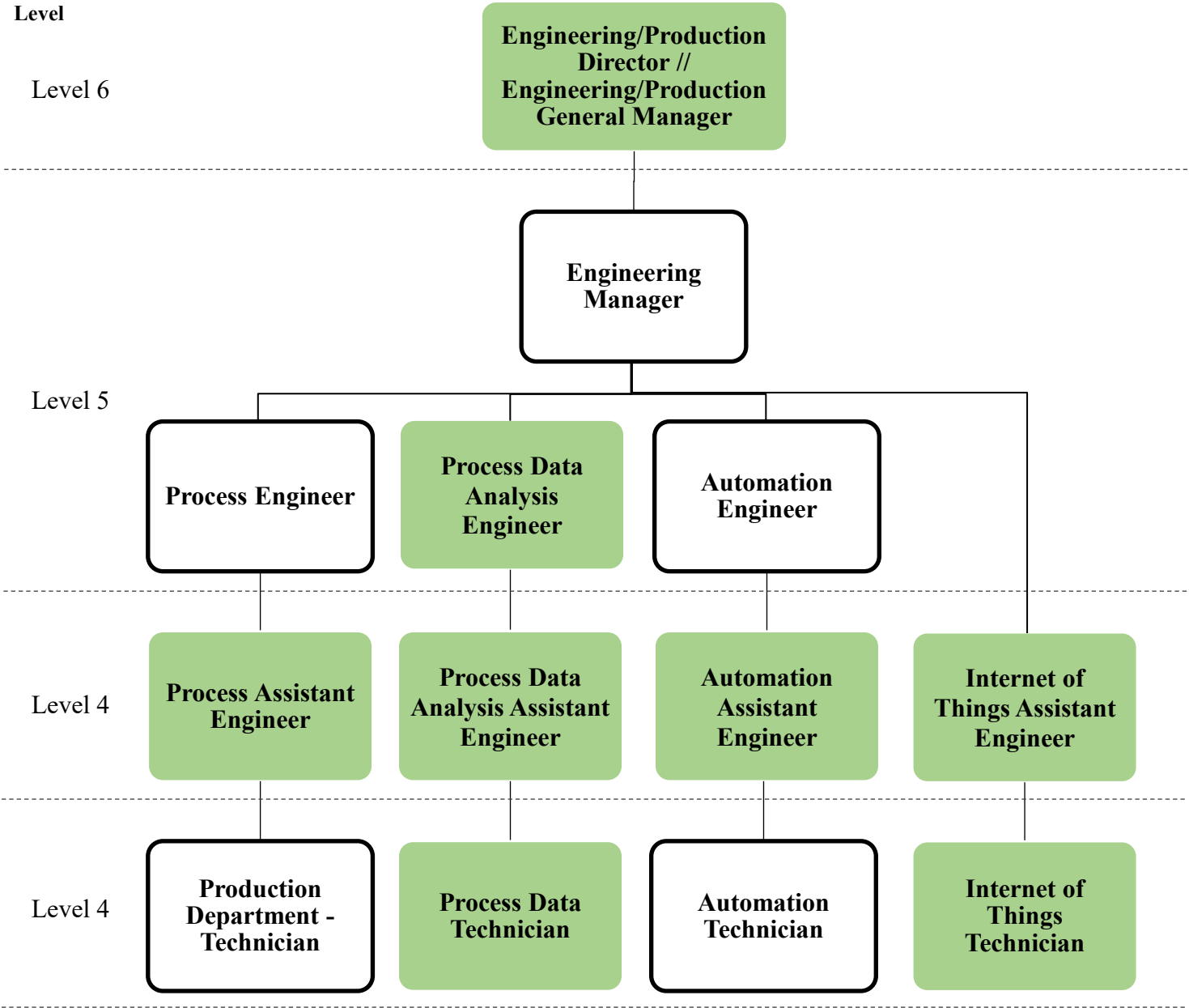
Functional area

Process Design and Development

Role

QF
Level

Level 6



Functional Area	Process Design and Development				
Job Position	Engineering / Production Director // Engineering / Production General Manager (Plastics Industry)				
Job Description	Strategise the design of plastic products, and refine associated process and production techniques to optimise production, enhance product functionality, and reduce costs. Anticipate future enterprise requirements for equipment, technologies, and systems. Promote digitalised operations across design, process, and production domains				
Core Competency Level and Credit (for reference)	Level 6 (64 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Formulate strategic plans for the design, process development, project management, and production technology advancement of plastic products, manage and optimise operations, implement automation initiatives to enhance design and production efficiency	106605L6 Formulate enterprise development strategies, consider cultural conditions of both domestic and international markets and results of competitive analysis, and formulate medium-and long-term development goals and measures for enterprise	6	4
			106601L6 Develop risk management strategies to reduce and avoid risks based on the enterprise's long-term development goals and actual operating conditions	6	4
			106604L6 Establish and maintain quality management system to enhance competitiveness and positive image of enterprise through quality management	6	6
			106603L6 Research, standardise, and plan manufacturing process for die casting and casting products, to ensure all indicators include cost control, environmental protection, product functionality, and appearance etc. meet the standards	6	5
			106582L6 Manage product development knowledge and continuously improve product design quality and efficiency	6	3
			106548L5 Develop project management strategies to ensure projects are implemented with appropriate resources and completed in timely and effective manner	5	4
			106586L6 Plan and set up automation systems to improve level of automated manufacturing in enterprises	6	5
			106561L5 Continuously improve factory environment and promote factory quality management, optimise occupational health and safety management, and improve production and operational efficiency	5	5
			111556L6 Establish “Industry 4.0” architecture to interconnect devices within enterprise, achieve single data source, uncover useful data, and assist enterprise in digital transformation and comprehensive operational improvements	6	6
		Establish a digital data management system based on “Industry 4.0” in the domains of product design, process development, and production, analyse applicable data domains, integrate data			

		sources, and enhance the effectiveness of product design, process development, and production operations	111557L6 Analyse application areas of “Industry 4.0”, helps enterprise to conduct data-driven and intelligent operations in appropriate areas and continuously improve efficiency	6	5
			111552L5 Implement “Industry 4.0” vertical and horizontal integration and connecting various departments and levels within enterprise to achieve data interconnection and interoperability, comprehensive digital transformation can be realised	5	6
			106587L5 Manage process design knowledge, standardise it, and continuously improve the process	5	6
			111551L4 To implement and apply “Industry 4.0”, understand the scope, departments, necessary tools and facilities for “Industry 4.0” implementation, and identify the various data on the dashboard for monitoring and preliminary analysis	4	5
	Additional Competency	Plan product design and development, encompassing concept formulation, environmental considerations, life cycle assessment, and intellectual property protection	106560L5 Conduct environmentally conscious product design and life cycle management to continuously minimise the environmental impact of products throughout manufacturing, use, and end-of-life disposal	5	6
			106574L5 Perform conceptual product design and engineering integration, balancing customer requirements, market trends, and internal constraints on human, machine, and material resources	5	3
			106581L5 Execute design registration, confidentiality measures, and review processes to safeguard enterprise intellectual property	5	3
		Establish product design and development system enabling concurrent development of individual product components while continuously improving product development efficiency	106575L5 Apply and monitor product data management and engineering change control systems to facilitate concurrent development and design of different product components	5	4
		Formulate project management strategies, assess risks, and implement digitised project management practices	106580L5 Conduct risk management for product development projects, formulate effective contingency and emergency response measures	5	3
		Manage factory operations, supervise and monitor production equipment to improve product quality, manage workplace risks to enhance the factory environment, and digitise risk data	106458L5 Execute workshop management to enhance production efficiency and monitor production schedules to ensure timely completion	4	4
			106460L4 Monitor and supervise the operation and maintenance of production equipment to reduce failure rates and ensure reliable equipment performance	5	3
			106562L5 Implement workplace risk management to protect the safety of employees and customers, and to reduce enterprise operational and financial risks	5	5

	Minimum 10 years of functional area relevant experience is recommended Minimum 5 years of plastic engineering manager or equivalent experience is recommended
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Functional Area	Process Design and Development				
Job Position	Engineering Manager (Plastics Industry)				
Job Description	Plan the manufacturing processes and automation systems for plastic products, manage and continuously improve the knowledge base for metal product process design				
Core Competency Level and Credit (for reference)	Level 5 (16 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Code
	Core Competency	Plan and configure automation systems	106586L6 Plan and set up automation systems to improve level of automated manufacturing in enterprises	6	5
		Manage and continuously improve process design knowledge	106587L5 Manage process design knowledge, standardise it, and continuously improve the process	5	6
		Introduce and apply “Industry 4.0” principles, understand the applicable domains, departments, essential tools, and facilities for Industry 4.0, implementation, identify various data items displayed on dashboards, and perform monitoring and preliminary analysis	111551L4 Introduce and apply “Industry 4.0”, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Design and plan manufacturing processes for plastic products across various forms and production methods	106585L5 Design and plan plastic product manufacturing process to ensure costs, environmental protection, product functionality, and appearance meet standards	5	5
			111566L5 Develop and formulate intelligent processing and testing procedures, methods, and equipment for plastic products, and upgrade them to machine networking and data-driven operation	5	6
		Define critical product process parameters requiring monitoring and analysis for plastic products, establish digitised operational procedures and performance indicators, lead process optimisation initiatives based on analytical results	111557L6 Analyse application areas of “Industry 4.0”, helps enterprise to conduct data-driven and intelligent operations in appropriate areas and continuously improve efficiency	6	5
			111555L5 Implement “Industry 4.0” digital operations and performance management, establish digital dashboards as needed, develop enterprise digital key performance indicators	5	6
			111549L4 Establish and apply “Industry 4.0” enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
		Plan, improve, and maintain automation systems for plastic processing	106492L5 Develop and formulate automated processing procedures, methods, and equipment for plastic products to improve production efficiency, stability, and safety	5	4

			106496L5 Develop maintenance plans and operating procedures for all machinery and peripheral equipment, and monitor their operation to ensure all machines within enterprise receive proper maintenance and avoid unexpected production downtime	5	4
			106500L5 Develop lean manufacturing and flexible manufacturing processes, layouts, and facilities, analyse flexible manufacturing requirements, select equipment; and achieve flexible manufacturing goals	5	6
		Select required automated production equipment, quality monitoring machinery, and ancillary devices	106494L4 Select and develop required manufacturing machinery and peripheral equipment, understand structure, types, operation, functions, and applications, and minimise the fault probability of intelligent production lines	4	3
			106495L4 Identify and configure the required product quality control equipment, align with daily quality monitoring needs, and ensure product consistency and process reliability	4	3
		Integrate data from key enterprise processes to enable real-time and comprehensive information access; consolidate and leverage diverse systems, include customer relationship management (CRM), product data management (PDM), supplier collaboration management (SCM), product lifecycle management (PLM), and computer-aided design (CAD), to aggregate and analyse dispersed information, supporting management in evidence-based decision-making, fully integrate enterprise resource planning (ERP) with manufacturing execution systems (MES) to track and record the entire process from raw materials to finished products	111552L5 Implement “Industry 4.0” vertical and horizontal integration and connecting various departments and levels within enterprise to achieve data interconnection and interoperability, comprehensive digital transformation can be realised	5	6
			106505L5 Formulate material requirements planning (MRP) plan based on delivery dates required by each material supplier to ensure timely delivery of materials and semi-finished products for production	5	3
			111547L3 Implement cybersecurity for “Industry 4.0”, promote network and information security control measures that simultaneously enable information exchange and ensure information system security in Industry 4.0	3	6
		Develop and maintain industrial IoT-related network communication technology systems for the enterprise; apply IoT technologies to enable machines to interact and communicate with other machines, objects, environments, and infrastructure	111550L4 Apply “Industry 4.0” implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
			106565L5 Establish and maintain market information management system to monitor real-time market conditions, and adjust and optimise market strategies accordingly	5	3
			106498L4 Apply programmable logic controllers (PLC) to write circuit control programs, meet functional operation requirements of intelligent production lines, and fulfill data transmission needs	4	4

			106494L4 Select and develop required manufacturing machinery and peripheral equipment, understand structure, types, operation, functions, and applications, and minimise the fault probability of intelligent production lines	4	3
			106497L4 Apply pneumatic, hydraulic, and electrical devices to develop automated systems, ensure the safe operation of automated systems, enhance production efficiency and effectiveness, reduce labour requirements, and lower operational costs	4	4
			106496L5 Formulate maintenance plans and operating procedures for various mechanical and peripheral equipment, monitor operational status to ensure all machines receive appropriate maintenance and prevent unplanned downtime	5	4
			Minimum 7 years of functional area relevant experience is recommended Minimum 2 years of plastic process engineer, process data analyst / engineer, automation engineer or equivalent experience; or 4 years of internet of things assistant engineer or equivalent experience is recommended		

Functional Area	Process Design and Development				
Job Position	Process Engineer (Plastics Industry)				
Job Description	Comprehend and plan the diverse manufacturing processes for plastic products				
Core Competency Level and Credit (for reference)	Level 5 (16 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Code
	Core Competency	Design and plan manufacturing processes for stamping and sheet metal products across various forms and types	106585L5 Design and plan manufacturing process for plastic products to ensure the standards are met in terms of cost control, environmental protection, product functionality, and appearance	5	5
		Optimise process sequences and production layouts to enhance process efficiency, and conduct real-time analysis of process parameters and manufacturing data	106500L5 Develop lean manufacturing and flexible manufacturing processes, layouts, and facilities, analyse flexible manufacturing requirements, select equipment, and achieve flexible manufacturing goals	5	6
			111551L4 To implement and apply “Industry 4.0”, understand the scope, departments, necessary tools and facilities for Industry 4.0 implementation, and identify the various data on the dashboard for monitoring and preliminary analysis	4	5
	Additional Competency	Conduct design analysis of manufacturing processes for plastic products	106523L4 Perform advanced plastic moulding and resolve production issues, master various processing parameters, and enhance injection moulding quality	4	4
			106524L4 Plan and implement in-plant plastic recycling, reduce plastic waste generation	4	6
			106526L4 Select and process new plastics and composite materials, meet product application requirements	4	4
			106428L3 Conduct other forming process to plastic products to meet application requirements	3	4
			106430L3 Conduct pre-and post-processing of plastic products to meet application requirements	3	4
			106440L3 Apply basic plastic material knowledge, to select material in suitable types and specifications for plastic products to achieve required functionality	3	3
		Optimise process parameters and resolve process-related problems	106426L3 Set parameters for traditional injection moulding equipment, assist in traditional injection moulding and defect analysis, to improve product quality	3	4
			106427L3 Set parameters for traditional plastic processing equipment, assist in traditional plastic processing and defect analysis, to improve product quality	3	4

	Minimum 7 years of functional area relevant experience is recommended Minimum 2 years of plastic process assistant engineer or equivalent experience is recommended
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Functional Area	Process Design and Development				
Job Position	Process Assistant Engineer (Plastics Industry)				
Job Description	Analyse and improve the manufacturing processes of plastic products, select suitable materials for product manufacturing, optimise process parameters, ensure smooth and efficient production				
Core Competency Level and Credit (for reference)	Level 4 (44 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Design and analyse the manufacturing processes of plastic products	106500L5 Develop lean manufacturing and flexible manufacturing processes, layouts, and facilities; analyse flexible manufacturing requirements; select equipment; and achieve flexible manufacturing goals	5	6
			106523L4 Perform advanced plastic moulding and resolve production issues, master various processing parameters, and enhance injection moulding quality	4	4
			106524L4 Plan and implement in-plant plastic recycling, reduce plastic waste generation	4	6
			106526L4 Select and process new plastics and composite materials, meet product application requirements	4	4
			106428L3 Conduct other forming process to plastic products to meet application requirements	3	4
			106430L3 Conduct pre-and post-processing of plastic products to meet application requirements	3	4
			106440L3 Apply basic plastic material knowledge, to select material in suitable types and specifications for plastic products to achieve required functionality	3	3
		Optimise process parameters and resolve production issues	106426L3 Set parameters for traditional injection moulding equipment, assist in traditional injection moulding and defect analysis, to improve product quality	3	4
			106427L3 Set parameters for traditional plastic processing equipment, assist in traditional plastic processing and defect analysis, to improve product quality	3	4
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional	Set injection moulding parameters, perform injection moulding and defect analysis, and collect real time manufacturing data	111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3

		Perform processing and surface treatment of plastic products	106525L4 Conduct plastic modification, develop appropriate preparation schemes, and meet various requirements	4	6
			106429L3 Conduct plastic colouring, correctly control plastic colour to meet customer requirements	3	4
			106431L3 Conduct mechanical surface treatment to plastic products to meet product application requirements	3	4
			106432L3 Conduct plasma surface treatment to plastic products to meet application requirements	3	4
			106433L3 Conduct chemical surface treatment to plastic products to meet product application requirements	3	4
			106434L3 Conduct vacuum ion plating surface treatment to plastic products to meet application requirements	3	4
			106435L3 Conduct coating to plastic products to meet application requirements	3	4
			106436L3 Conduct in-mould decoration to plastic moulds to meet product application requirements	3	4
			106437L3 Conduct surface printing plastic products to meet product application requirements	3	4
			Minimum 6 years of functional area relevant experience is recommended		
Minimum 2 years of plastic production department - technician or equivalent experience is recommended					

Functional Area	Process Design and Development				
Job Position	Production Department - Technician (Plastics Industry)				
Job Description	Independently calibrate and operate equipment, perform advanced plastic moulding processing and various new plastic and composite material moulding processes, assist in testing and recording the efficiency and effectiveness of each process, and provide process control and improvement recommendations to superiors				
Core Competency Level and Credit (for reference)	Level 3 (74 credits)				
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency		
			Code	Level	Credit
		Set injection moulding parameters, perform injection moulding and defect analysis, and collect real time manufacturing data	106426L3 Set parameters for traditional injection moulding equipment, assist in traditional injection moulding and defect analysis, to improve product quality	3	4
			106427L3 Set parameters for traditional plastic processing equipment, assist in traditional plastic processing and defect analysis, to improve product quality	3	4
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
		Perform plastic product processing and surface treatment	106523L4 Perform advanced plastic moulding and resolve production issues, master various processing parameters, and enhance injection moulding quality	4	4
			106428L3 Conduct other forming process to plastic products to meet application requirements	3	4
			106524L4 Plan and implement in-plant plastic recycling, reduce plastic waste generation	4	6
			106525L4 Conduct plastic modification, develop appropriate preparation schemes, and meet various requirements	4	6
			106526L4 Select and process new plastics and composite materials, meet product application requirements	4	4
			106429L3 Conduct plastic colouring, correctly control plastic colour to meet customer requirements	3	4
			106430L3 Conduct pre-and post-processing of plastic products to meet application requirements	3	4
			106431L3 Conduct mechanical surface treatment to plastic products to meet product application requirements	3	4
			106432L3	3	4

			Conduct plasma surface treatment to plastic products to meet application requirements				
			106433L3 Conduct chemical surface treatment to plastic products to meet product application requirements	3	4		
			106434L3 Conduct vacuum ion plating surface treatment to plastic products to meet application requirements	3	4		
			106435L3 Conduct coating to plastic products to meet application requirements	3	4		
			106436L3 Conduct in-mould decoration to plastic moulds to meet product application requirements	3	4		
			106437L3 Conduct surface printing plastic products to meet product application requirements	3	4		
			106440L3 Apply basic plastic material knowledge, to select material in suitable types and specifications for plastic products to achieve required functionality	3	3		
			Additional Competence	Execute occupational safety and health operations and implement environmentally friendly production	106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2	3
			Minimum 5 years of functional area relevant experience is recommended				
Minimum 2 years of plastic senior technician or equivalent experience is recommended							

Functional Area	Process Design and Development				
Job Position	Process Data Analyst / Engineer (Plastics Industry)				
Job Description	Integrate process parameters for plastic products, propose comprehensive recommendations for rectifying and redesigning the entire manufacturing process as well as developing new processes, establish and update performance indicators, conduct ongoing performance management and continuous optimisation				
Core Competency Level and Credit (for reference)	Level 5 (38 credits)				
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency		
			Code	Level	Credit
		Implement digitisation and intelligent operations for plastic product processing, establish automated data acquisition and analysis systems	106586L6 Plan and set up automation systems to improve level of automated manufacturing in enterprises	6	5
			106585L5 Design and plan plastic product manufacturing process to ensure costs, environmental protection, product functionality, and appearance meet standards	5	6
			111566L5 Develop and formulate intelligent processing and testing procedures, methods, and equipment for plastic products, and upgrade them to machine networking and data-driven operation	5	6
		Define critical product process parameters requiring monitoring and analysis for plastic products, establish digitised operational procedures and performance indicators, lead process optimisation initiatives based on analytical results	111555L5 Implement “Industry 4.0” digital operations and performance management, establish digital dashboards as needed, develop enterprise digital key performance indicators	5	6
			111557L6 Analyse application areas of “Industry 4.0”, helps enterprise to conduct data-driven and intelligent operations in appropriate areas and continuously improve efficiency	6	5
			111549L4 Establish and apply “Industry 4.0” enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			111551L4 Introduce and apply “Industry 4.0”, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Integrate process data for plastic products to achieve synergy between process data and design data, thereby accelerating the product development cycle	106426L3 Set parameters for traditional injection moulding equipment, assist in traditional injection moulding and defect analysis, to improve product quality	3	4
			106427L3 Set parameters for traditional plastic processing equipment, assist in traditional plastic processing and defect analysis, to improve product quality	3	4
		Analyse process data of plastic products, examine interrelationships among various process parameters, provide	111550L4 Apply “Industry 4.0” implementation tools, include hardware and software, to collect and utilise data across various operational areas of the enterprise	4	5

		recommendations for optimised production processes. Manage enterprise process data for metal die casting, casting, and extrusion operations, and transform such data into enterprise standards and knowledge bases for these processing technologies			
Minimum 7 years of functional area relevant experience is recommended Minimum 2 years of plastic process data assistant analyst / engineer or equivalent experience is recommended					

Functional Area	Process Design and Development				
Job Position	Process Data Assistant Analyst / Engineer (Plastics Industry)				
Job Description	Analyse process parameters of plastic products, provide improvement recommendations for plastic product manufacturing based on data, and collaborate on product and process data to shorten product development cycles and optimise process efficiency				
Core Competency Level and Credit (for reference)	Level 4 (30 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Integrate process data of plastic product manufacturing, achieve collaboration between process data and design data, accelerate product development cycles	111566L5 Develop and formulate intelligent processing and testing procedures, methods, and equipment for plastic products, and upgrade them to machine networking and data-driven operation	5	6
			106426L3 Set parameters for traditional injection moulding equipment, assist in traditional injection moulding and defect analysis, to improve product quality	3	4
			106427L3 Set parameters for traditional plastic processing equipment, assist in traditional plastic processing and defect analysis, to improve product quality	3	4
		Analyse process data of plastic product manufacturing, identify the interrelationships between different process parameters, provide recommendations for optimising production processes, manage in-house process data, and convert it into enterprise standards and knowledge for plastic product manufacturing	111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Review real time production data, machine data, quality data, and environmental data from digital dashboards, analyse process bottlenecks in plastic product manufacturing, and propose improvement solutions; evaluate the effectiveness of digital lean production	111562L3 Operate and maintain intelligent and automated equipment, systems, and processes for plastic product manufacturing, collect and monitor plastic product process data	3	3
			111559L3 Apply "Industry 4.0" digital lean principles and use real time data collected from relevant departments, initially identify wasteful processes or procedures throughout enterprise's value chain, enable focused operational improvements and lean practices within corresponding departments	3	6
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3

	Minimum 6 years of functional area relevant experience is recommended Minimum 2 years of plastic process data technician or equivalent experience is recommended
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Functional Area	Process Design and Development				
Job Position	Process Data Technician (Plastics Industry)				
Job Description	Collect production, machine, quality, and environmental data from plastic product manufacturing processes, ensure the accuracy of collected data, and monitor system network security				
Core Competency Level and Credit (for reference)	Level 3 (12 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code		Level
	Core Competency	Review real time production data, machine data, quality data, and environmental data from digital dashboards, analyse process bottlenecks in plastic product manufacturing, and propose improvement solutions; evaluate the effectiveness of digital lean production	111562L3 Operate and maintain intelligent and automated equipment, systems, and processes for plastic product manufacturing, collect and monitor plastic product process data	3	3
			111559L3 Apply "Industry 4.0" digital lean principles and use real time data collected from relevant departments, initially identify wasteful processes or procedures throughout enterprise's value chain, enable focused operational improvements and lean practices within corresponding departments	3	6
			Monitor the collection and display of process data for anomalies, ensure normal equipment operation and data confidentiality	111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3
	Minimum 5 years of functional area relevant experience is recommended				

Functional Area	Process Design and Development				
Job Position	Automation Engineer (Plastics Industry)				
Job Description	Develop and select equipment suitable for automation in plastic processing, plan processes, layouts, and facilities for lean production and flexible manufacturing				
Core Competency Level and Credit (for reference)	Level 5 (30 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Plan, improve, and maintain automated systems for plastic processing	106586L6 Plan and set up automation systems to improve level of automated manufacturing in enterprises	6	5
			106488L5 Develop and formulate automated processing procedures, methods, and equipment for stamping products to improve production efficiency, stability, and safety	5	4
			106496L5 Develop maintenance plans and operating procedures for all machinery and peripheral equipment, and monitor their operation to ensure all machines within enterprise receive proper maintenance and avoid unexpected production downtime	5	4
			106500L5 Develop lean manufacturing and flexible manufacturing processes, layouts, and facilities, analyse flexible manufacturing requirements; select equipment, and achieve flexible manufacturing goals	5	6
			111551L4 Introduce and apply “Industry 4.0”, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
			106494L4 Select and develop required manufacturing machinery and peripheral equipment, understand structure, types, operation, functions, and applications, and minimise the fault probability of intelligent production lines	4	3
	Additional Competency	Establish automated processing and inspection systems	106495L4 Identify and configure the required product quality control equipment, align with daily quality monitoring needs, and ensure product consistency and process reliability	4	3
			106497L4 Apply pneumatic, hydraulic, and electrical devices to develop automated systems, ensure the safe operation of automated systems, enhance production efficiency and effectiveness, reduce labour requirements, and lower operational costs	4	4
			106499L4 Apply multi-axis robotic arms to develop automated systems, improve efficiency and flexibility of intelligent production lines	4	4

			106498L4		
			Apply programmable logic controllers (PLC) to write circuit control programs, meet functional operation requirements of intelligent production lines, and fulfil data transmission needs		
			106396L3		
			Install and apply fixtures to improve production stability and efficiency		
Minimum 7 years of functional area relevant experience is recommended					
Minimum 2 years of plastic automation assistant engineer or equivalent experience is recommended					

Functional Area	Process Design and Development				
Job Position	Automation Assistant Engineer (Plastics Industry)				
Job Description	Select appropriate machines to produce plastic products based on the manufacturing process, develop automation systems, ensure smooth and efficient production processes				
Core Competency Level and Credit (for reference)	Level 4 (28 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Define automation processing and inspection processes, as well as maintenance plans for plastic products	106492L5 Develop and formulate automated processing procedures, methods, and equipment for plastic products to improve production efficiency, stability, and safety	5	4
			106496L5 Develop maintenance plans and operating procedures for all machinery and peripheral equipment, and monitor their operation to ensure all machines within enterprise receive proper maintenance and avoid unexpected production downtime	5	4
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Establish automation processing and inspection systems	106497L4 Apply pneumatic, hydraulic, and electrical devices to develop automated systems, ensure the safe operation of automated systems, enhance production efficiency and effectiveness, reduce labour requirements, and lower operational costs	4	4
			106499L4 Apply multi-axis robotic arms to develop automated systems, improve efficiency and flexibility of intelligent production lines	4	4
			106498L4 Apply programmable logic controllers (PLC) to write circuit control programs, meet functional operation requirements of intelligent production lines, and fulfill data transmission needs	4	4
			106396L3 Install and apply fixtures to improve production stability and efficiency	3	3
	Additional Competency	Install fixtures, set up, commission, and maintain various manufacturing machines, intelligent production systems, and peripheral equipment, and collect production data in real time	106395L3 Install, debug, and maintain various manufacturing machinery, intelligent production systems, peripheral equipment to ensure they are in normal working order and meet production requirements	3	4
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3

	Minimum 6 years of functional area relevant experience is recommended Minimum 2 years of plastic automation technician or equivalent experience is recommended
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Functional Area	Process Design and Development				
Job Position	Automation Technician (Plastics Industry)				
Job Description	Install, improve, commission, and maintain various manufacturing machines and peripheral equipment within the enterprise				
Core Competency Level and Credit (for reference)	Level 3 (10 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Install fixtures, set up, commission, and maintain various manufacturing machines, intelligent production systems, and peripheral equipment, and collect production data in real time	106395L3 Install, debug, and maintain various manufacturing machinery, intelligent production systems, peripheral equipment to ensure they are in normal working order and meet production requirements	3	4
			106396L3 Install and apply fixtures to improve production stability and efficiency	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
	Additional Competen	Execute occupational safety and health operations and implement environmentally friendly production	106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2	3
Minimum 5 years of functional area relevant experience is recommended					

Functional Area	Process Design and Development				
Job Position	Internet of Things Assistant Engineer (Tooling, Metals and Plastics Industry)				
Job Description	Establish interconnected system for machines, instruments, computers, and environmental monitoring within the production process, and integrate the data into design, process, product lifecycle management and analysis software systems				
Core Competency Level and Credit (for reference)	Level 4 (43 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Integrate key process data within the enterprise to assist in real time and comprehensive information management, consolidate and utilise various systems (include Customer relationship management (CRM), product data management (PDM), supply chain management (SCM), product lifecycle management (PLM), and computer-aided design (CAD)) to aggregate and analyse dispersed information, supporting management in making intelligent decisions, and fully integrate Enterprise resource planning (ERP) with manufacturing execution system (MES) to track and record the entire process from raw materials to finished products	111552L5 Implement “Industry 4.0” vertical and horizontal integration and connecting various departments and levels within enterprise to achieve data interconnection and interoperability, comprehensive digital transformation can be realised	5	6
			106505L5 Formulate material requirements planning (MRP) plan based on delivery dates required by each material supplier to ensure timely delivery of materials and semi-finished products for production	5	3
			111547L3 Implement cybersecurity for Industry 4.0, promote network and information security control measures that simultaneously enable information exchange and ensure information system security in Industry 4.0	3	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Develop and maintain industrial Internet of Things (IoT) network communication technology systems for the enterprise, and apply IoT technology to enable machines to interact and communicate with other machines, objects, environments, and infrastructure	111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
			106565L5 Establish and maintain market information management system to monitor real time market conditions, and adjust and optimise market strategies accordingly	5	3
			106498L4 Apply programmable logic controllers (PLC) to write circuit control programs, meet functional operation requirements of intelligent production lines, and fulfill data transmission needs	4	4
			106494L4 Select and develop required manufacturing machinery and peripheral equipment, understand structure, types, operation, functions, and applications, and minimise the fault probability of intelligent production lines	4	3

			106497L4 Apply pneumatic, hydraulic, and electrical devices to develop automated systems, ensure the safe operation of automated systems, enhance production efficiency and effectiveness, reduce labour requirements, and lower operational costs	4	4
			106496L5 Develop maintenance plans and operating procedures for all machinery and peripheral equipment, and monitor their operation to ensure all machines within enterprise receive proper maintenance and avoid unexpected production downtime	5	4
	Additional Competency	Install, monitor, and maintain industrial IoT systems, connecting various machines, equipment, and systems, collect required production data	106395L3 Install, debug, and maintain various manufacturing machinery, intelligent production systems, peripheral equipment to ensure they are in normal working order and meet production requirements	3	4
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
	Minimum 6 years of functional area relevant experience is recommended Minimum 2 years of internet of things technician or equivalent experience is recommended				

Functional Area	Process Design and Development				
Job Position	Internet of Things Technician (Tooling, Metals and Plastics Industry)				
Job Description	Install, monitor, and maintain IoT devices and systems that connect design and production machines, instruments, and environmental monitoring facilities, and ensure the cybersecurity of the production network				
Core Competency Level and Credit (for reference)	Level 3 (18 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code		Level
	Core Competency	Install, monitor, and maintain industrial IoT systems, connecting various machines, equipment, and systems, collect required production data	111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
			106395L3 Install, debug, and maintain various manufacturing machinery, intelligent production systems, peripheral equipment to ensure they are in normal working order and meet production requirements	3	4
			111547L3 Implement cybersecurity for Industry 4.0, promote network and information security control measures that simultaneously enable information exchange and ensure information system security in Industry 4.0	3	6
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
	Minimum 5 years of functional area relevant experience is recommended				

Branches **Tooling Industry**

Functional area **Process Design and Development**

Role

QF
Level

Level 6

**Engineering/Production
Director //
Engineering/Production
General Manager**

**Engineering
Manager**

Level 5

Process Engineer

**Process Data
Analysis Engineer**

**Automation
Engineer**

**Process Assistant
Engineer**

**Process Data
Analysis Assistant
Engineer**

**Automation
Assistant
Engineer**

**Internet of Things
Assistant
Engineer**

Level 4

**Production
Department -
Technician**

**Process Data
Assistant
Technician**

**Automation
Assistant
Technician**

**Internet of Things
Assistant
Technician**

Level 3

**Process Data
Technician**

**Automation
Technician**

**Internet of Things
Technician**

Functional Area	Process Design and Development				
Job Position	Engineering / Production Director // Engineering / Production General Manager (Tooling Industry)				
Job Description	Plan the strategy for mould design and refine its manufacturing processes and production techniques to optimise production, thereby enhance mould functionality and reduce costs. Anticipate the equipment, technologies, and systems required for future business development. Promote digitalisation in design, processes, and production				
Core Competency Level and Credit (for reference)	Level 6 (64 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Plan the strategy for developing mould products, processes, project management, and production techniques; management and optimisation of operations; implementation of automation; and improvement of design and production efficiency	106605L6 Formulate enterprise development strategies, consider cultural conditions of both domestic and international markets and results of competitive analysis, and formulate medium-and long-term development goals and measures for enterprise	6	4
			106601L6 Develop risk management strategies to reduce and avoid risks based on the enterprise's long-term development goals and actual operating conditions	6	4
			106604L6 Establish and maintain quality management system to enhance competitiveness and positive image of enterprise through quality management	6	6
			106582L6 Manage product development knowledge and continuously improve product design quality and efficiency	6	3
			106548L5 Develop project management strategies to ensure projects are implemented with appropriate resources and completed in timely and effective manner	5	4
			106583L6 Research, development, plan, and schedule mould manufacturing processes to ensure all aspects, include cost control, environmental protection, mould functionality, and appearance, meet the standards	6	6
			106586L6 Plan and set up automation systems to improve level of automated manufacturing in enterprises	6	5
			106561L5 Continuously improve factory environment and promote factory quality management, optimise occupational health and safety management, and improve production and operational efficiency	5	5
			111556L6 Establish "Industry 4.0" architecture to interconnect devices within enterprise, achieve single data source, uncover useful data, and assist enterprise in digital transformation and comprehensive operational improvements	6	6
		Establish digital data management system based on "Industry 4.0" in product design, process development, and production; analyse data application			

		areas; integrate data; and improve the efficiency of product design, processes, and production	111557L6 Analyse application areas of “Industry 4.0”, helps enterprise to conduct data-driven and intelligent operations in appropriate areas and continuously improve efficiency	6	5
			111552L5 Implement “Industry 4.0” vertical and horizontal integration and connecting various departments and levels within enterprise to achieve data interconnection and interoperability, comprehensive digital transformation can be realised	5	6
			106587L5 Manage process design knowledge, standardise it, and continuously improve the process	5	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Plan product design and development, include concepts, environmental protection, life cycle, and intellectual property protection	106560L5 Conduct eco-friendly product design and lifecycle management to continuously reduce environmental impact of products throughout their entire lifecycle, from manufacturing, usage and end-of-life disposal	5	6
			106574L5 Identify constraints on human, machine, and material resources to develop products	5	3
			106581L5 Protect enterprise intellectual property right through conduct various design registrations, maintain confidentiality, and undergo review	5	3
		Establish product design and development system to enable the parallel development of individual product components and continuously improve product development efficiency	106575L5 Apply and monitor product data management and engineering change network systems, to enable parallel development and design of different product components	5	4
		Develop project management strategies, assess risks, and promote data-driven project management	106580L5 Conduct risk management for product development projects, formulate effective contingency and emergency response measures	5	3
		Conduct overall production management of all workshops in the factory, supervise production and equipment maintenance, and monitor and reduce production risks	106458L5 Implement factory management to improve production efficiency and monitor the timely completion of production plans	5	5
			106460L4 Monitor and supervise operation and maintenance of production equipment, reduce rate of equipment failures, and ensure normal operation of production equipment	4	4
			106562L5 Implement workplace risk management to ensure the safety of employees and customers, and reduce operational and financial risks for business	5	3

Minimum 10 years of functional area relevant experience is recommended

Minimum 5 years of mould engineering manager or equivalent experience is recommended

Functional Area	Process Design and Development				
Job Position	Engineering Manager (Tooling Industry)				
Job Description	Plan the mould manufacturing process and automation system and manage and continuously improve mould process design knowledge				
Core Competency Level and Credit (for reference)	Level 5 (16 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Guide and plan the implementation of automation and intelligentisation and set up systems to improve process efficiency	106586L6 Plan and set up automation systems to improve level of automated manufacturing in enterprises	6	5
		Manage and continuously improve process design knowledge and promote knowledge digitisation	106587L5 Manage process design knowledge, standardise it, and continuously improve the process	5	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Promote digitalisation and intelligent operation of mould processing and establish automated data acquisition and analysis system	106583L6 Research, development, plan, and schedule mould manufacturing processes to ensure all aspects, include cost control, environmental protection, mould functionality, and appearance, meet the standards	6	6
			106590L4The Conduct advanced CNC turning precision and ultra-precision machining, master various machining parameters, to improve quality of mould components	4	4
			106591L4 Conduct advanced EDM machining, master various machining data, to enhance quality of mould components and parts	4	3
			106514L3 Perform coordinate grinding and coordinate boring, and master various machining parameters to improve quality of mould components	3	4
		Define the process and technical parameters for mould processing products that require monitoring and analysis, set up digital operation and performance indicators, and lead process optimisation work based on the analysis results.	111555L5 Implement "Industry 4.0" digital operations and performance management, establish digital dashboards as needed, develop enterprise digital key performance indicators	5	6
			111557L6 Analyse application areas of "Industry 4.0", helps enterprise to conduct data-driven and intelligent operations in appropriate areas and continuously improve efficiency	6	5
			111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6

		Plan, improve, and maintain automated mould processing systems	106496L5 Develop maintenance plans and operating procedures for all machinery and peripheral equipment, and monitor their operation to ensure all machines within enterprise receive proper maintenance and avoid unexpected production downtime	5	4
			106500L5 Develop lean manufacturing and flexible manufacturing processes, layouts, and facilities; analyse flexible manufacturing requirements; select equipment; and achieve flexible manufacturing goals	5	6
		Screen required automated production and quality control machinery and peripheral equipment	106494L4 Select and develop required manufacturing machinery and peripheral equipment, understand structure, types, operation, functions, and applications, and minimise the fault probability of intelligent production lines	4	3
			106495L4 Identify and configure the required product quality control equipment, align with daily quality monitoring needs, and ensure product consistency and process reliability	4	3
		Integrate key enterprise processes to provide real-time and comprehensive information; integrate and utilise different systems (include customer relationship management (CRM), production data management (PDM), supplier management collaboration Platform (SCM), product lifecycle management (PLM), and computer-aided design (CAD)) to aggregate and analyse fragmented information, assisting management in making informed decisions; and fully integrate enterprise resource planning (ERP) with manufacturing execution system (MES) to track and record the process from raw materials to finished products	111552L5 Implement “Industry 4.0” vertical and horizontal integration and connecting various departments and levels within enterprise to achieve data interconnection and interoperability, comprehensive digital transformation can be realised	5	6
			106505L5 Formulate material requirements planning (MRP) plan based on delivery dates required by each material supplier to ensure timely delivery of materials and semi-finished products for production	5	3
			111547L3 Implement cybersecurity for Industry 4.0, promote network and information security control measures that simultaneously enable information exchange and ensure information system security in Industry 4.0	3	6
		Develop and maintain industrial IoT-related network communication technology systems for enterprises; and apply IoT technology to enable machines to interact and communicate with other machines, objects, environment, and infrastructure	111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
			106565L5 Establish and maintain market information management system to monitor real-time market conditions, and adjust and optimise market strategies accordingly	5	3
			106498L4 Apply programmable logic controllers (PLC) to write circuit control programs, meet functional operation requirements of intelligent production lines, and fulfill data transmission needs	4	4

			106497L4 Apply pneumatic, hydraulic, and electrical devices to develop automated systems, ensure the safe operation of automated systems, enhance production efficiency and effectiveness, reduce labour requirements, and lower operational costs	4	4
Minimum 7 years of functional area relevant experience is recommended Minimum 2 years of mould process engineer, process data analyst / engineer, automation engineer or equivalent experience; or 4 years of internet of things assistant engineer or equivalent experience is recommended					

Functional Area	Process Design and Development				
Job Position	Process Engineer (Tooling Industry)				
Job Description	Understand and plan various processes in mould manufacturing				
Core Competency Level and Credit (for reference)	Level 5 (17 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code		Level
	Core Competency	Design and plan the manufacturing process of moulds of various types	106583L6 Research, development, plan, and schedule mould manufacturing processes to ensure all aspects, include cost control, environmental protection, mould functionality, and appearance, meet the standards	6	6
		Optimise processes and production layout, improve process efficiency, and conduct real-time process and manufacturing data analysis	106500L5 Develop lean manufacturing and flexible manufacturing processes, layouts, and facilities; analyse flexible manufacturing requirements; select equipment; and achieve flexible manufacturing goals	5	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Design and analysis of mould manufacturing process, optimisation of process parameters, and problem solving	106509L3 Perform advanced CNC milling and master various machining parameters to improve quality of mould components	5	6
			106510L3 Perform advanced CNC turning and master various machining parameters to improve quality of mould components	3	4
			106512L3 Perform wire EDM and master various machining parameters to improve quality of mould components	3	4
			106514L3 Perform coordinate grinding and coordinate boring, and master various machining parameters to improve quality of mould components	3	4
			106515L4 Assemble and adjust moulds to meet operational requirements, ensure smooth production	4	4

Minimum 7 years of functional area relevant experience is recommended

Minimum 2 years of mould process assistant engineer or equivalent experience is recommended

Functional Area	Process Design and Development				
Job Position	Process Assistant Engineer (Tooling Industry)				
Job Description	Analyse and improve the mould manufacturing process, select appropriate materials for mould making, and optimise process parameters to ensure smooth and efficient processes				
Core Competency Level and Credit (for reference)	Level 4 (27 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Design and analysis of mould manufacturing process, optimisation of process parameters, and problem solving	106500L5 Develop lean manufacturing and flexible manufacturing processes, layouts, and facilities; analyse flexible manufacturing requirements; select equipment; and achieve flexible manufacturing goals	5	6
			106509L3 Perform advanced CNC milling and master various machining parameters to improve quality of mould components	3	4
			106510L3 Perform advanced CNC turning and master various machining parameters to improve quality of mould components	3	4
			106512L3 Perform wire EDM and master various machining parameters to improve quality of mould components	3	4
			106515L4 Assemble and adjust moulds to meet operational requirements, ensure smooth production	4	4
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Real-time acquisition of manufacturing data	111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
		Secondary processing, surface treatment, and assembly of moulds	106589L4 Conduct advanced CNC multi-axis precision milling, master various machining parameters, and improve quality of mould components	4	6
			106590L4 Conduct advanced CNC turning precision and ultra-precision machining, master various machining parameters, to improve quality of mould components	4	4
			106591L4 Conduct advanced EDM machining, master various machining data, to enhance quality of mould components and parts	4	3

			106513L3		
			Perform profile grinding operations and master machining data to improve quality and management of mould components		
			106515L4		
			Assemble and adjust moulds to meet operational requirements, ensure smooth production	4	4
Minimum 6 years of functional area relevant experience is recommended					
Minimum 2 years of mould production department - technician or equivalent experience is recommended					

Functional Area	Process Design and Development				
Job Position	Production Department - Technician (Tooling Industry)				
Job Description	Able to adjust and operate equipment independently, perform precision machining of various high-end moulds, assist in testing and record the effectiveness and results of each process, and provide suggestions to superiors for process control and improvement				
Core Competency Level and Credit (for reference)	Level 4 (24 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Obtain manufacturing data in real-time	111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
		Perform secondary machining, surface treatment, and assembly of moulds	106589L4 Conduct advanced CNC multi-axis precision milling, master various machining parameters, and improve quality of mould components	4	6
			106590L4 Conduct advanced CNC turning precision and ultra-precision machining, master various machining parameters, to improve quality of mould components	4	4
			106591L4 Conduct advanced EDM machining, master various machining data, to enhance quality of mould components and parts	4	3
			106513L3 Perform profile grinding operations and master machining data to improve quality and management of mould components	3	4
			106515L4 Assemble and adjust moulds to meet operational requirements, ensure smooth production	4	4
		Minimum 6 years of functional area relevant experience is recommended			
	Minimum 2 years of mould senior technician or equivalent experience is recommended				

Functional Area	Process Design and Development				
Job Position	Process Data Analyst / Engineer (Tooling Industry)				
Job Description	By integrating process parameters for mould processing, propose recommendations for overhauling the entire manufacturing process and developing new processes, establish and update performance indicators for continuous performance management and optimisation				
Core Competency Level and Credit (for reference)	Level 5 (45 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Promote digitalisation and intelligent operation of mould processing and establish automated data acquisition and analysis system	106583L6 Research, development, plan, and schedule mould manufacturing processes to ensure all aspects, include cost control, environmental protection, mould functionality, and appearance, meet the standards	6	6
			106590L4 Conduct advanced CNC turning precision and ultra-precision machining, master various machining parameters, to improve quality of mould components	4	4
			106591L4 Conduct advanced EDM machining, master various machining data, to enhance quality of mould components and parts	4	3
			106514L3 Perform coordinate grinding and coordinate boring, and master various machining parameters to improve quality of mould components	3	4
			111567L5 Develop and formulate intelligent processing and inspection procedures, methods, and equipment for moulds, and upgrade them to machine networking and data-driven operation	5	6
		Define the process and technical parameters for mould processing products that require monitoring and analysis, set up digital operation and performance indicators, and lead process optimisation work based on the analysis results	111555L5 Implement "Industry 4.0" digital operations and performance management, establish digital dashboards as needed, develop enterprise digital key performance indicators	5	6
			111557L6 Analyse application areas of "Industry 4.0", helps enterprise to conduct data-driven and intelligent operations in appropriate areas and continuously improve efficiency	6	5
			111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5

Additional Competency	Integrate mould process data to enable collaboration between process and design data, accelerate product development cycles	106509L3 Perform advanced CNC milling and master various machining parameters to improve quality of mould components	3	4
		106510L3 Perform advanced CNC turning and master various machining parameters to improve quality of mould components	3	4
		106511L3 Perform advanced EDM and master various machining parameters to improve quality of mould components	3	4
		106512L3 Perform wire EDM and master various machining parameters to improve quality of mould components	3	4
	Analyse mould process data, dissect the relationships between different parameters in the process, and provide suggestions to optimise the production process; manage process data within the enterprise and transform it into the enterprise's mould process standards and knowledge	111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
Minimum 7 years of functional area relevant experience is recommended Minimum 2 years of mould process data assistant analyst / engineer or equivalent experience is recommended				

Functional Area	Process Design and Development				
Job Position	Process Data Assistant Analyst / Engineer (Tooling Industry)				
Job Description	Analyse mould manufacturing process parameters, provide suggestions for improving mould manufacturing process based on the data, coordinate mould and process data to shorten mould development cycle and optimise process efficiency				
Core Competency Level and Credit (for reference)	Level 4 (41 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Integrate mould process data to enable collaboration between process and design data, accelerate product development cycles	111567L5 Develop and formulate intelligent processing and inspection procedures, methods, and equipment for moulds, and upgrade them to machine networking and data-driven operation	5	6
			106509L3 Perform advanced CNC milling and master various machining parameters to improve quality of mould components	3	4
			106510L3 Perform advanced CNC turning and master various machining parameters to improve quality of mould components	3	4
			106511L3 Perform advanced EDM and master various machining parameters to improve quality of mould components	3	4
			106512L3 Perform wire EDM and master various machining parameters to improve quality of mould components	3	4
			106406L2 Perform surface grinding and master various processing data to improve the quality of mould components	2	3
			111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
	Additional	Analyse mould process data, dissect the relationships between different parameters in the process, and provide suggestions to optimise the production process; manage process data within the enterprise and transform it into the enterprise's mould process standards and knowledge	111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
			111563L3 Operate, maintain intelligent and automated mould processing and design equipment, systems and processes, collect and monitor mould process data	3	3

		dashboard; analyse bottleneck processes in mould manufacturing and propose improvement solutions; evaluate the effectiveness of digital lean manufacturing	111559L3 Apply "Industry 4.0" digital lean principles and use real-time data collected from relevant departments, initially identify wasteful processes or procedures throughout enterprise's value chain, enable focused operational improvements and lean practices within corresponding departments	3	6
		Monitor the data collection and display during the monitoring process for any abnormalities, ensuring proper equipment operation and data confidentiality	111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
Minimum 6 years of functional area relevant experience is recommended					
Minimum 2 years of mould process data technician or equivalent experience is recommended					

Functional Area	Process Design and Development				
Job Position	Process Data Technician (Tooling Industry)				
Job Description	Collect various production, machine, quality, and environmental data during the mould processing, ensure the accuracy of the collected data and the network security of the monitoring system				
Core Competency Level and Credit (for reference)	Level 3 (12 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Examine real-time production data, machine data, quality data, and environmental data from the digital dashboard; analyse bottleneck processes in mould manufacturing and propose improvement solutions; evaluate the effectiveness of digital lean manufacturing	111563L3 Operate, maintain intelligent and automated mould processing and design equipment, systems and processes, collect and monitor mould process data	3	3
			111559L3 Apply "Industry 4.0" digital lean principles and use real-time data collected from relevant departments, initially identify wasteful processes or procedures throughout enterprise's value chain, enable focused operational improvements and lean practices within corresponding departments	3	6
			Monitor the data collection and display during the monitoring process for any abnormalities, ensure proper equipment operation and data confidentiality	111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3
Minimum 5 years of functional area relevant experience is recommended					

Functional Area	Process Design and Development				
Job Position	Automation Engineer (Tooling Industry)				
Job Description	Develop and select equipment suitable for automating mould processing, and plan the processes, layouts, and facilities for lean manufacturing and flexible manufacturing				
Core Competency Level and Credit (for reference)	Level 5 (26 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Plan, improve, and maintain automated mould processing systems	106586L6 Plan and set up automation systems to improve level of automated manufacturing in enterprises	6	5
			106496L5 Develop maintenance plans and operating procedures for all machinery and peripheral equipment, and monitor their operation to ensure all machines within enterprise receive proper maintenance and avoid unexpected production downtime	5	4
			106500L5 Develop lean manufacturing and flexible manufacturing processes, layouts, and facilities; analyse flexible manufacturing requirements; select equipment; and achieve flexible manufacturing goals	5	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Screen required automated production and quality control machinery and peripheral equipment	106494L4 Select and develop required manufacturing machinery and peripheral equipment, understand structure, types, operation, functions, and applications, and minimise the fault probability of intelligent production lines	4	3
			106495L4 Identify and configure the required product quality control equipment, align with daily quality monitoring needs, and ensure product consistency and process reliability	4	3
	Additional Competency	Establish automated processing and testing system	106497L4 Apply pneumatic, hydraulic, and electrical devices to develop automated systems, ensure the safe operation of automated systems, enhance production efficiency and effectiveness, reduce labour requirements, and lower operational costs	4	4
			106498L4 Apply programmable logic controllers (PLC) to write circuit control programs, meet functional operation requirements of intelligent production lines, and fulfill data transmission needs	4	4
			106499L4 Apply multi-axis robotic arms to develop automated systems, improve efficiency and flexibility of intelligent production lines	4	4

		106396L3 Install and apply fixtures to improve production stability and efficiency	3	3
Minimum 7 years of functional area relevant experience is recommended Minimum 2 years of mould automation assistant engineer or equivalent experience is recommended				

Functional Area	Process Design and Development				
Job Position	Automation Assistant Engineer (Tooling Industry)				
Job Description	Based on mould manufacturing process, select appropriate machines to manufacture products, develop automated systems to ensure smooth and efficient processes				
Core Competency Level and Credit (for reference)	Level 4 (24 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code		Level
	Core Competency	Develop automated processing, inspection, and maintenance plans for moulds	106496L5 Develop maintenance plans and operating procedures for all machinery and peripheral equipment, and monitor their operation to ensure all machines within enterprise receive proper maintenance and avoid unexpected production downtime	5	4
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Establish automated processing and testing system	106497L4 Apply pneumatic, hydraulic, and electrical devices to develop automated systems, ensure the safe operation of automated systems, enhance production efficiency and effectiveness, reduce labour requirements, and lower operational costs	4	4
			106498L4 Apply programmable logic controllers (PLC) to write circuit control programs, meet functional operation requirements of intelligent production lines, and fulfill data transmission needs	4	4
			106499L4 Apply multi-axis robotic arms to develop automated systems, improve efficiency and flexibility of intelligent production lines	4	4
			106396L3 Install and apply fixtures to improve production stability and efficiency	3	3
	Additional Competency	Perform fixture installation, install, debug, and maintain various manufacturing machinery, intelligent production systems, and peripheral equipment, and collect production data in real time	106395L3 Install, debug, and maintain various manufacturing machinery, intelligent production systems, peripheral equipment to ensure they are in normal working order and meet production requirements	3	4
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
Minimum 6 years of functional area relevant experience is recommended					
Minimum 2 years of mould automation technician or equivalent experience is recommended					

Functional Area	Process Design and Development				
Job Position	Automation Technician (Tooling Industry)				
Job Description	Install, improve, debug, and maintain various manufacturing machinery and peripheral equipment within enterprise				
Core Competency Level and Credit (for reference)	Level 3 (10 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Perform fixture installation, install, debug, and maintain various manufacturing machinery, intelligent production systems, and peripheral equipment, and collect production data in real time	106395L3 Install, debug, and maintain various manufacturing machinery, intelligent production systems, peripheral equipment to ensure they are in normal working order and meet production requirements	3	4
			106396L3 Install and apply fixtures to improve production stability and efficiency	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
	Additional Competency	Perform occupational safety and health operations and conduct environmentally friendly production	106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2	3
Minimum 5 years of functional area relevant experience is recommended					

Functional Area	Process Design and Development				
Job Position	Internet of Things Assistant Engineer (Tooling, Metals and Plastics Industry)				
Job Description	Establish interconnected system for all machinery, instruments, computers, and environmental monitoring in the manufacturing process, and integrate the data into various design, process, and product lifecycle software management and analysis systems				
Core Competency Level and Credit (for reference)	Level 4 (43 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Integrate key enterprise processes to provide real-time and comprehensive information; integrate and utilise different systems (include customer relationship management (CRM), production data management (PDM), supplier management collaboration platform (SCM), product lifecycle management (PLM), and computer-aided design (CAD)) to aggregate and analyse fragmented information, assisting management in making informed decisions; and fully integrate enterprise resource planning (ERP) with manufacturing execution system (MES) to track and record the process from raw materials to finished products	111552L5 Implement “Industry 4.0” vertical and horizontal integration and connecting various departments and levels within enterprise to achieve data interconnection and interoperability, comprehensive digital transformation can be realised	5	6
			106505L5 Formulate material requirements planning (MRP) plan based on delivery dates required by each material supplier to ensure timely delivery of materials and semi-finished products for production	5	3
			111547L3 Implement cybersecurity for Industry 4.0, promote network and information security control measures that simultaneously enable information exchange and ensure information system security in Industry 4.0	3	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Develop and maintain industrial IoT-related network communication technology systems for enterprises; and apply IoT technology to enable machines to interact and communicate with other machines, objects, environment, and infrastructure	111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
			106565L5 Establish and maintain market information management system to monitor real-time market conditions, and adjust and optimise market strategies accordingly	5	3
			106498L4 Apply programmable logic controllers (PLC) to write circuit control programs, meet functional operation requirements of intelligent production lines, and fulfil data transmission needs	4	4
			106494L4 Select and develop required manufacturing machinery and peripheral equipment, understand structure, types, operation, functions, and applications, and minimise the fault probability of intelligent production lines	4	3

			106497L4 Apply pneumatic, hydraulic, and electrical devices to develop automated systems, ensure the safe operation of automated systems, enhance production efficiency and effectiveness, reduce labour requirements, and lower operational costs	4	4
			106496L5 Develop maintenance plans and operating procedures for all machinery and peripheral equipment, and monitor their operation to ensure all machines within enterprise receive proper maintenance and avoid unexpected production downtime	5	4
	Additional Competency	Install, monitor, and maintain industrial IoT systems to connect various machines and systems and collect the necessary data	106395L3 Install, debug, and maintain various manufacturing machinery, intelligent production systems, peripheral equipment to ensure they are in normal working order and meet production requirements	3	4
	Minimum 6 years of functional area relevant experience is recommended Minimum 2 years of internet of things technician or equivalent experience is recommended				

Functional Area	Process Design and Development					
Job Position	Internet of Things Technician (Tooling, Metals and Plastics Industry)					
Job Description	Install, monitor, and maintain IoT devices and systems that connect design and production machines, instruments, and environmental monitoring facilities, and ensure the cybersecurity of the production network					
Core Competency Level and Credit (for reference)	Level 3 (18 credits)					
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency			
			Code		Level	Credit
			111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise		4	5
			106395L3 Install, debug, and maintain various manufacturing machinery, intelligent production systems, peripheral equipment to ensure they are in normal working order and meet production requirements		3	4
			111547L3 Implement cybersecurity for Industry 4.0, promote network and information security control measures that simultaneously enable information exchange and ensure information system security in Industry 4.0		3	6
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations		3	3
	Minimum 5 years of functional area relevant experience is recommended					

Branches

Metal Die Casting, Extrusion and Casting Industry

Functional area

Product Manufacturing

Role

QF
Level

Level 6

**Engineering/Production
Director //
Engineering/Production
General Manager**

Level 5

**Production
Manager**

Level 4

**Production
Supervisor**

**Production
Data Assistant
Analyst /
Engineer**

Level 3

**Senior
Technician**

**Production
Digital Data
Administrator**

Technician

Level 2

Operator

Functional Area	Product Manufacturing				
Job Position	Engineering / Production Director // Engineering / Production General Manager (Metal Die casting, casting and extrusion Industry)				
Job Description	Strategise to design, process improvement and production techniques of die-casting, casting, and extrusion products, optimise production, drive improvements in product functionality and cost reduction. Anticipate equipment, technologies, and systems required for enterprise future business development. Promote digitalisation in design, processes, and production				
Core Competency Level and Credit (for reference)	Level 6 (64 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Plan for metal die casting, casting, and extrusion product, process, project management, and production technology development strategy, manage and optimise operation, implement automation, improve design and production efficiency	106605L6 Formulate enterprise development strategies, consider cultural conditions of both domestic and international markets and results of competitive analysis, and formulate medium-and long-term development goals and measures for enterprise	6	4
			106601L6 Develop risk management strategies to reduce and avoid risks based on the enterprise's long-term development goals and actual operating conditions	6	4
			106604L6 Establish and maintain quality management system to enhance competitiveness and positive image of enterprise through quality management	6	6
			106603L6 Research, standardise, and plan manufacturing process for die casting and casting products, to ensure all indicators include cost control, environmental protection, product functionality, and appearance etc. to meet the standards	6	5
			106582L6 Manage product development knowledge and continuously improve product design quality and efficiency	6	3
			106548L5 Develop project management strategies to ensure projects are implemented with appropriate resources and completed in timely and effective manner	5	4
			106586L6 Plan and set up automation systems to improve level of automated manufacturing in enterprises	6	5
			106561L5 Continuously improve factory environment and promote factory quality management, optimise occupational health and safety management, and improve production and operational efficiency	5	5
			111556L6 Establish "Industry 4.0" architecture to interconnect devices within enterprise, achieve single data source, uncover useful data, and assist enterprise in digital transformation and comprehensive operational improvements	6	6
		Establish digital data management system based on "Industry 4.0" in product design, process development, and production sector; analyse data application areas, integrate data, improve			

		product design, processes, and production efficiency	111557L6 Analyse application areas of “Industry 4.0”, helps enterprise to conduct data-driven and intelligent operations in appropriate areas and continuously improve efficiency	6	5
			111552L5 Implement “Industry 4.0” vertical and horizontal integration and connecting various departments and levels within enterprise to achieve data interconnection and interoperability, comprehensive digital transformation can be realised	5	6
			106587L5 Manage process design knowledge, standardise it, and continuously improve the process	5	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Plan product design and development, include concepts, environmental protection, life cycle, and intellectual property protection	106560L5 Conduct eco-friendly product design and lifecycle management to continuously reduce environmental impact of products throughout their entire lifecycle, from manufacturing, usage and end-of-life disposal	5	6
			106574L5 Identify constraints on human, machine, and material resources to develop products	5	3
			106581L5 Protect enterprise intellectual property right through conduct various design registrations, maintain confidentiality, and undergo review	5	3
		Establish product design and development system to enable parallel development of individual product components and continuously improve product development efficiency	106575L5 Apply and monitor product data management and engineering change network systems, to enable parallel development and design of different product components	5	4
		Develop project management strategies, assess risks, and promote data-driven project management	106580L5 Conduct risk management for product development projects, formulate effective contingency and emergency response measures	5	3
		Perform factory management, monitor and supervise production equipment to improve product quality, manage workplace risks to improve factory environment, and quantify risk data	106458L5 Implement factory management to improve production efficiency and monitor the timely completion of production plans	5	5
			106460L4 Monitor and supervise operation and maintenance of production equipment, reduce rate of equipment failures, and ensure normal operation of production equipment	4	4
			106562L5 Implement workplace risk management to ensure the safety of employees and customers, and reduce operational and financial risks for business	5	3

Minimum 10 years of functional area relevant experience is recommended

Minimum 5 years of metal die casting, casting and extrusion production manager or equivalent experience is recommended

Functional Area	Product Manufacturing				
Job Position	Production Manager (Metal Die casting, casting and extrusion Industry)				
Job Description	1. Carry out production according to the production plan, implement factory management to resolve various production problems 2. Continuously improve factory environment and promote factory quality management according to enterprise requirements for human resources, security, crisis management, knowledge management, and corporate governance etc.				
Core Competency Level and Credit (for reference)	Level 5 (22 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Code
	Core Competency	Perform production management across all workshops in the factory, supervise production and equipment maintenance, monitor and mitigate production risks	106562L5 Implement workplace risk management to ensure the safety of employees and customers, and reduce operational and financial risks for business	5	3
			106458L5 Implement factory management to improve production efficiency and monitor the timely completion of production plans	5	5
			106460L4 Monitor and supervise operation and maintenance of production equipment, reduce rate of equipment failures, and ensure normal operation of production equipment	4	4
		Continuously collect and analyse production and quality data to maintain production stability, improve efficiency and product quality	106561L5 Continuously improve factory environment and promote factory quality management, optimise occupational health and safety management, and improve production and operational efficiency	5	5
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Supervise production and formulate production plans, balance production line, manage production line equipment and tools to ensure safe and smooth production process, analyse production data	106384L3 Supervise production to ensure timely completion and achievement of original quality requirements under all predictable and regular conditions	3	3
			106461L4 Conduct occupational safety and health (OSH) risk assessments, assist identify and record potential risks, reduce or eliminate OSH hazards	4	3
			106454L4 Establish and maintain equipment / tool management system, align with enterprise's development needs, and improve production efficiency and stability	4	4
		Arrange and adjust production plan, balance production line	106397L3 Arrange production plans and promptly fulfill all original and adjusted production needs	3	3
			106501L4 Balance production line, avoid local bottlenecks, improve overall production efficiency	4	4

		Master common data analysis methods, track various production indicators (include capacity, equipment utilisation, etc.), make accurate judgments on production data. Analyse data from digital dashboards to enable implementation of digital production	111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
		Provide timely report and suggestion to management to improve production efficiency in response to real-time production status of metal stamping and sheet metal processes	106518L4 Perform metal die casting and casting processes, master various processing parameters to enhance quality and resolve production issues	4	4
			106519L3 Perform metal extrusion, master various machining parameters, to improve quality of metal extrusion, and solve production problems	3	3
			111574L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	6
Minimum 7 years of functional area relevant experience is recommended					
Minimum 2 years of metal die casting, casting and extrusion product design engineer or equivalent experience is recommended					

Functional Area	Product Manufacturing				
Job Position	Production Supervisor (Metal Die casting, casting and extrusion Industry)				
Job Description	1. Carry out plant management, supervise production progress, and monitor the status of production equipment 2. Balance production and make adjustments, reasonably arrange equipment and surrounding facilities				
Core Competency Level and Credit (for reference)	Level 4 (22 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Conduct production supervision, manage production line equipment and tools to ensure a safe and smooth production process, and perform production data analysis	106384L3 Supervise production to ensure timely completion and achievement of original quality requirements under all predictable and regular conditions	3	3
			106461L4 Conduct occupational safety and health (OSH) risk assessments, assist identify and record potential risks, reduce or eliminate OSH hazards	4	3
			106454L4 Establish and maintain equipment / tool management system, align with enterprise's development needs, and improve production efficiency and stability	4	4
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Schedule and adjust production plans, and balance the production line	106397L3 Arrange production plans and promptly fulfill all original and adjusted production needs	3	3
			106501L4 Balance production line, avoid local bottlenecks, improve overall production efficiency	4	4
	Additional Competency	Calibrate equipment, perform metal die casting and extrusion, resolve production issues, and collect manufacturing data in real time	106518L4 Perform metal die casting and casting processes, master various processing parameters to enhance quality and resolve production issues	4	4
			106519L3 Perform metal extrusion, master various machining parameters, to improve quality of metal extrusion, and solve production problems	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
		Carry out secondary processing and surface treatment of metal casting products, and implement quality improvement	106419L3 Perform secondary processing of metal die-casting and casting components to meet product application requirements	3	3
			106520L4 Perform metal heat treatment and surface modification, meet product application requirements	4	3

		106420L3 Perform mechanical surface treatment to metal products to meet application requirements	3	3
		106424L3 Conduct marking processing to metal products to meet application requirements	3	3
		106439L3 Apply basic metal material knowledge, to select material in suitable types and specifications for metal products to achieve required functionality	3	3
		Minimum 6 years of functional area relevant experience is recommended		
	Minimum 2 years of metal die casting, casting and extrusion senior technician or equivalent experience is recommended			

Functional Area	Product Manufacturing				
Job Position	Senior Technician (Metal Die casting, casting and extrusion Industry)				
Job Description	Independently calibrate and operate equipment, perform metal die casting, casting, extrusion processing, and various secondary processing, and carry out basic equipment maintenance				
Core Competency Level and Credit (for reference)	Level 3 (25 credits)				
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency		
			Code	Level	Credit
		Calibrate equipment, perform metal die casting and extrusion, resolve production issues, and collect manufacturing data in real time	106518L4 Perform metal die casting and casting processes, master various processing parameters to enhance quality and resolve production issues	4	4
			106519L3 Perform metal extrusion, master various machining parameters, to improve quality of metal extrusion, and solve production problems	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
		Carry out secondary processing and surface treatment of metal casting products, and implement quality improvement	106419L3 Perform secondary processing of metal die-casting and casting components to meet product application requirements	3	3
			106520L4 Perform metal heat treatment and surface modification, meet product application requirements	4	3
			106420L3 Perform mechanical surface treatment to metal products to meet application requirements	3	3
			106424L3 Conduct marking processing to metal products to meet application requirements	3	3
			106439L3 Apply basic metal material knowledge, to select material in suitable types and specifications for metal products to achieve required functionality	3	3
	Additional Competency	Conduct metal casting and extrusion product processing, and carry out production in accordance with occupational safety and health and environmental protection requirements	106376L2 Operate metal die casting and casting equipment, perform processing to meet product application requirements	2	4
			106377L2 Operate metal extrusion equipment, perform processing to meet product application requirements	2	3
			106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2	3

	Minimum 6 years of functional area relevant experience is recommended
	Minimum 2 years of metal die casting, casting and extrusion technician or equivalent experience is recommended

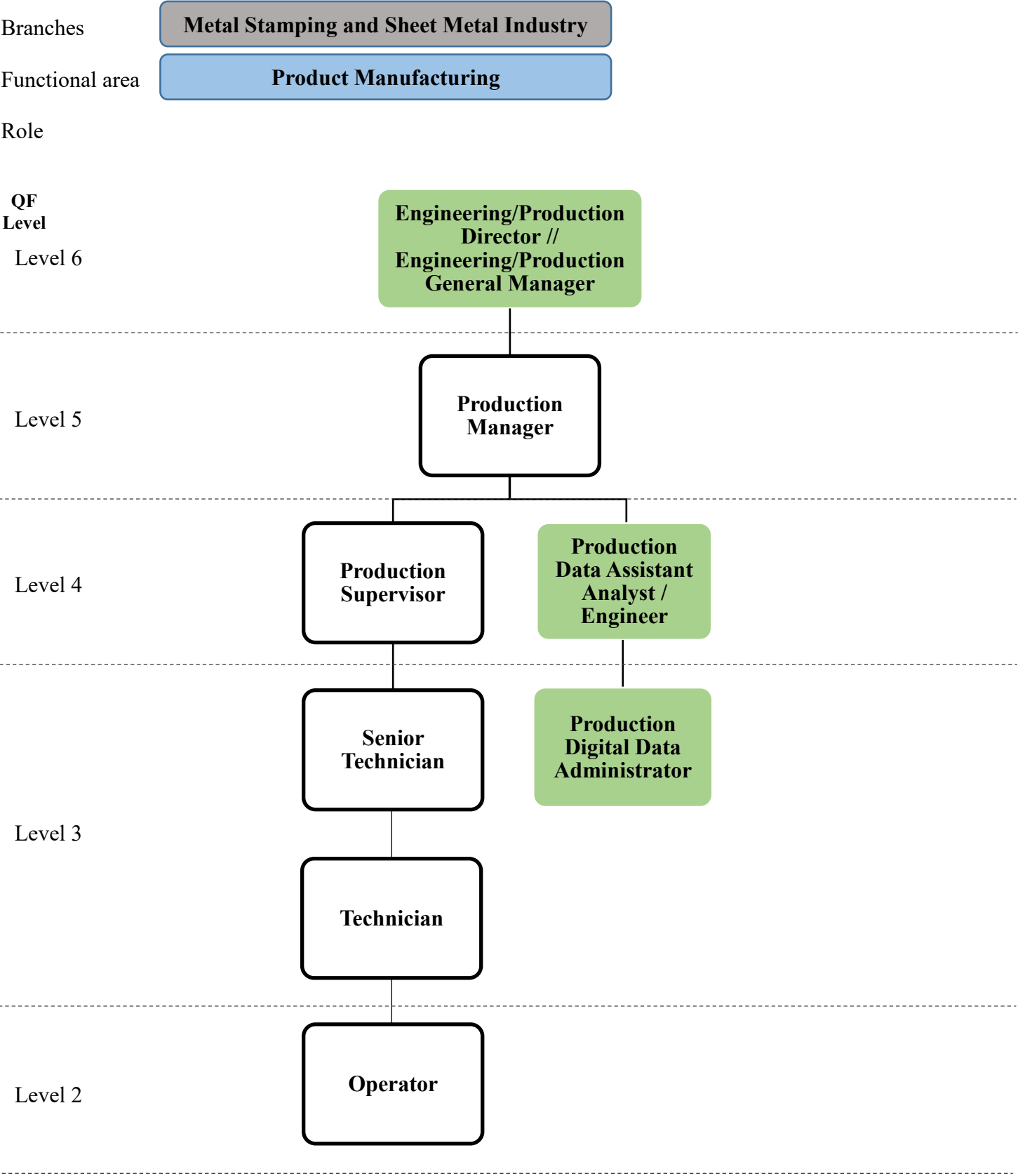
Functional Area	Product Manufacturing				
Job Position	Technician (Metal Die casting, casting and extrusion Industry)				
Job Description	Independently calibrate and operate equipment, perform metal die casting, casting, and extrusion processing, and carry out basic equipment maintenance				
Core Competency Level and Credit (for reference)	Level 3 (13 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code		Level
	Core Competency	Calibrate equipment, perform metal die casting and extrusion, resolve production issues, and collect manufacturing data in real time	106518L4 Perform metal die casting and casting processes, master various processing parameters to enhance quality and resolve production issues	4	4
			106519L3 Perform metal extrusion, master various machining parameters, to improve quality of metal extrusion, and solve production problems	3	3
			106439L3 Apply basic metal material knowledge, to select material in suitable types and specifications for metal products to achieve required functionality	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
	Additional Competency	Conduct metal casting and extrusion product processing, and carry out production in accordance with occupational safety and health and environmental protection requirements	106376L2 Operate metal die casting and casting equipment, perform processing to meet product application requirements	2	4
			106377L2 Operate metal extrusion equipment, perform processing to meet product application requirements	2	3
			106368L1 Understand methods of usage of various common basic hand tools and use them correctly to assist in production	1	3
			106369L1 Assist production and provide effective production support	1	3
			106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2	3
Minimum 5 years of functional area relevant experience is recommended					
Minimum 2 years of metal die casting, casting and extrusion operator or equivalent experience is recommended					

Functional Area	Product Manufacturing				
Job Position	Operator (Metal Die casting, casting and extrusion Industry)				
Job Description	Operate die casting, casting, and extrusion equipment for processing, and perform basic equipment maintenance				
Core Competency Level and Credit (for reference)	Level 2 (19 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code		Level
	Core Competency	Conduct metal casting and extrusion product processing, and carry out production in accordance with occupational safety and health and environmental protection requirements	106376L2 Operate metal die casting and casting equipment, perform processing to meet product application requirements	2	4
			106377L2 Operate metal extrusion equipment, perform processing to meet product application requirements	2	3
			106368L1 Understand methods of usage of various common basic hand tools and use them correctly to assist in production	1	3
			106369L1 Assist production and provide effective production support	1	3
			106438L3 Conduct product and semi-finished product packaging to meet product application requirements	3	3
			106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2	3
	Minimum 3 years of functional area relevant experience is recommended				

Functional Area	Product Manufacturing				
Job Position	Production Data Assistant Analyst / Engineer (Metal Die casting, casting and extrusion Industry)				
Job Description	Analyse production data of metal die casting, casting, and extrusion processing, propose suggestions for improving production efficiency, monitor the implementation of accepted suggestions, and continuously improve production based on real-time data				
Core Competency Level and Credit (for reference)	Level 4 (29 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Master commonly used data analysis methods, follow up on various production indicators (include capacity, equipment utilisation, etc.), make accurate judgments on production data, and analyse data from the digital dashboard to ensure the implementation of digital production	111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Report to management and provide timely recommendations based on the real-time situation of metal die casting, casting, and extrusion processing, to enhance production efficiency	106518L4 Perform metal die casting and casting processes, master various processing parameters to enhance quality and resolve production issues	4	4
			106519L3 Perform metal extrusion, master various machining parameters, to improve quality of metal extrusion, and solve production problems	3	3
			111574L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	6
	Additional Competency	Maintain and monitor the digital dashboard, report abnormal situations to management, and carry out lean production based on collected data to reduce waste and defects. Monitor the network security of the production data system	111559L3 Apply "Industry 4.0" digital lean principles and use real-time data collected from relevant departments, initially identify wasteful processes or procedures throughout enterprise's value chain, enable focused operational improvements and lean practices within corresponding departments	3	6
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3

		Monitor whether the data collection at each stage of the production site for metal die casting, casting, and extrusion processing is operating normally, and ensure that the data displayed on the digital dashboard is accurate and reliable	111569L3 Operate and maintain data acquisition equipment and systems for metal die casting, casting and extrusion products; store, manage, and assist in analysis of digital production data for metal die casting, casting and extrusion products	3	3
Minimum 6 years of functional area relevant experience is recommended Minimum 2 years of metal die casting, casting and extrusion production digital data administrator or equivalent experience is recommended					

Functional Area	Product Manufacturing				
Job Position	Production Digital Data Administrator (Metal Die casting, casting and extrusion Industry)				
Job Description	Collect real-time production data from metal die casting, casting, and extrusion processes, and carry out lean production, monitor the accuracy of the data, and ensure the network security of the production data system				
Core Competency Level and Credit (for reference)	Level 3 (19 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Maintain and monitor the digital dashboard, report abnormal situations to management, and carry out lean production based on collected data to reduce waste and defects. Monitor the network security of the production data system	111559L3 Apply "Industry 4.0” digital lean principles and use real-time data collected from relevant departments, initially identify wasteful processes or procedures throughout enterprise’s value chain, enable focused operational improvements and lean practices within corresponding departments	3	6
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
		Monitor whether the data collection at each stage of the production site for metal die casting, casting, and extrusion processing is operating normally, and ensure that the data displayed on the digital dashboard is accurate and reliable	106518L4 Perform metal die casting and casting processes, master various processing parameters to enhance quality and resolve production issues	4	4
			106519L3 Perform metal extrusion, master various machining parameters, to improve quality of metal extrusion, and solve production problems	3	3
			111569L3 Operate and maintain data acquisition equipment and systems for metal die casting, casting and extrusion products; store, manage, and assist in analysis of digital production data for metal die casting, casting and extrusion products	3	3
			Minimum 5 years of functional area relevant experience is recommended		



Functional Area	Product Design and Development				
Job Position	Engineering / Production Director // Engineering / Production General Manager (Metal Stamping and Sheet Metal Industry)				
Job Description	Strategise to design, process improvement and production techniques of stamping and sheet metal products, optimise production, drive improvements in product functionality and cost reduction. Anticipate equipment, technologies, and systems required for enterprise future business development. Promote digitalisation in design, processes, and production				
Core Competency Level and Credit (for reference)	Level 6 (65 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Plan for metal stamping and sheet metal product, process, project management, and production technology development strategy, manage and optimise operation, implement automation, improve design and production efficiency	106605L6 Formulate enterprise development strategies, consider cultural conditions of both domestic and international markets and results of competitive analysis, and formulate medium-and long-term development goals and measures for enterprise	6	4
			106601L6 Develop risk management strategies to reduce and avoid risks based on the enterprise's long-term development goals and actual operating conditions	6	4
			106604L6 Establish and maintain quality management system to enhance competitiveness and positive image of enterprise through quality management	6	6
			106602L5 Design and plan manufacturing process for metal stamping products to ensure the standards are met in terms of cost control, environmental protection, product functionality, and appearance	5	6
			106582L6 Manage product development knowledge and continuously improve product design quality and efficiency	6	3
			106548L5 Develop project management strategies to ensure projects are implemented with appropriate resources and completed in timely and effective manner	5	4
			106586L6 Plan and set up automation systems to improve level of automated manufacturing in enterprises	6	5
			106561L5 Continuously improve factory environment and promote factory quality management, optimise occupational health and safety management, and improve production and operational efficiency	5	5
			111556L6 Establish "Industry 4.0" architecture to interconnect devices within enterprise, achieve single data source, uncover useful data, and assist enterprise in digital transformation and comprehensive operational improvements	6	6
		Establish digital data management system based on "Industry 4.0" in product design, process development, and production sector; analyse data application areas, integrate data, improve			

		product design, processes, and production efficiency	111557L6 Analyse application areas of “Industry 4.0”, helps enterprise to conduct data-driven and intelligent operations in appropriate areas and continuously improve efficiency	6	5
			111552L5 Implement “Industry 4.0” vertical and horizontal integration and connecting various departments and levels within enterprise to achieve data interconnection and interoperability, comprehensive digital transformation can be realised	5	6
			106587L5 Manage process design knowledge, standardise it, and continuously improve the process	5	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Plan product design and development, include concepts, environmental protection, life cycle, and intellectual property protection	106560L5 Conduct eco-friendly product design and lifecycle management to continuously reduce environmental impact of products throughout their entire lifecycle, from manufacturing, usage and end-of-life disposal	5	6
			106574L5 Identify constraints on human, machine, and material resources to develop products	5	3
			106581L5 Protect enterprise intellectual property right through conduct various design registrations, maintain confidentiality, and undergo review	5	3
		Establish product design and development system to enable parallel development of individual product components and continuously improve product development efficiency	106575L5 Apply and monitor product data management and engineering change network systems, to enable parallel development and design of different product components	5	4
		Develop project management strategies, assess risks, and promote data-driven project management	106580L5 Conduct risk management for product development projects, formulate effective contingency and emergency response measures	5	3
		Perform factory management, monitor and supervise production equipment to improve product quality, manage workplace risks to improve factory environment, and quantify risk data	106458L5 Implement factory management to improve production efficiency and monitor the timely completion of production plans	5	5
			106460L4 Monitor and supervise operation and maintenance of production equipment, reduce rate of equipment failures, and ensure normal operation of production equipment	4	4
			106562L5 Implement workplace risk management to ensure the safety of employees and customers, and reduce operational and financial risks for business	5	3

Minimum 10 years of functional area relevant experience is recommended

Minimum 5 years of metal stamping and sheet metal production manager or equivalent experience is recommended

Functional Area	Product Manufacturing				
Job Position	Production Manager (Metal Stamping and Sheet Metal Industry)				
Job Description	1. Carry out production according to the production plan, implement factory management to resolve various production problems 2. Continuously improve factory environment and promote factory quality management according to enterprise requirements for human resources, security, crisis management, knowledge management, and corporate governance etc.				
Core Competency Level and Credit (for reference)	Level 5 (22 credits)				
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency		
			Code	Level	Code
		Perform production management across all workshops in the factory, supervise production and equipment maintenance, monitor and mitigate production risks	106562L5 Implement workplace risk management to ensure the safety of employees and customers, and reduce operational and financial risks for business	5	3
			106458L5 Implement factory management to improve production efficiency and monitor the timely completion of production plans	5	5
			106460L4 Monitor and supervise operation and maintenance of production equipment, reduce rate of equipment failures, and ensure normal operation of production equipment	4	4
		Continuously collect and analyse production and quality data to maintain production stability, improve efficiency and product quality	106561L5 Continuously improve factory environment and promote factory quality management, optimise occupational health and safety management, and improve production and operational efficiency	5	5
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Supervise production and formulate production plans, balance production line, manage production line equipment and tools to ensure safe and smooth production process, analyse production data	106384L3 Supervise production to ensure timely completion and achievement of original quality requirements under all predictable and regular conditions	3	3
			106461L4 Conduct occupational safety and health (OSH) risk assessments, assist identify and record potential risks, reduce or eliminate OSH hazards	4	3
			106454L4 Establish and maintain equipment / tool management system, align with enterprise's development needs, and improve production efficiency and stability	4	4
		Arrange and adjust production plan, balance production line	106397L3 Arrange production plans and promptly fulfill all original and adjusted production needs	3	3
			106501L4 Balance production line, avoid local bottlenecks, improve overall production efficiency	4	4

		Master common data analysis methods, track various production indicators (include capacity, equipment utilisation, etc.), make accurate judgments on production data. Analyse data from digital dashboards to enable implementation of digital production	111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
	Provide timely report and suggestion to management to improve production efficiency in response to real-time production status of metal stamping and sheet metal processes		106415L3 Adjust stamping equipment, perform various forms of stamping processes, resolve production problems, and improve product quality	3	3
			106517L3 Perform sheet metal continuous / transfer stamping to meet product application requirements	3	3
			111575L4 Implement digitalisation of metal stamping and sheet metal processing equipment and related configurations, provide real-time visualisation dashboards for production status in metal stamping and sheet metal processing workshops	4	6
	Minimum 7 years of functional area relevant experience is recommended Minimum 2 years of metal stamping and sheet metal production supervisor, production data assistant analyst / engineer or equivalent experience is recommended				

Functional Area	Product Manufacturing				
Job Position	Production Supervisor (Metal Stamping and Sheet Metal Industry)				
Job Description	1. Carry out plant management, supervise production progress, and monitor the status of production equipment 2. Balance production and make adjustments, reasonably arrange equipment and surrounding facilities				
Core Competency Level and Credit (for reference)	Level 4 (22 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Conduct production supervision, manage production line equipment and tools to ensure a safe and smooth production process, and perform production data analysis	106384L3 Supervise production to ensure timely completion and achievement of original quality requirements under all predictable and regular conditions	3	3
			106461L4 Conduct occupational safety and health (OSH) risk assessments, assist identify and record potential risks, reduce or eliminate OSH hazards	4	3
			106454L4 Establish and maintain equipment / tool management system, align with enterprise's development needs, and improve production efficiency and stability	4	4
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Schedule and adjust production plans, and balance the production line	106397L3 Arrange production plans and promptly fulfill all original and adjusted production needs	3	3
			106501L4 Balance production line, avoid local bottlenecks, improve overall production efficiency	4	4
	Additional Competency	Calibrate equipment, perform metal stamping and resolve production issues, and collect manufacturing data in real time	106415L3 Adjust stamping equipment, perform various forms of stamping processes, resolve production problems, and improve product quality	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
		Carry out secondary processing and surface treatment of metal stamping and sheet metal products, and implement quality improvement	106416L3 Perform metal pipe and wire forming to meet product application requirements	3	3
			106417L3 Perform sheet metal continuous / transfer stamping to meet product application requirements	3	3
			106516L4 Perform non-traditional and special sheet metal processing, meet product application requirements	4	3

			106517L4 Perform stamping processing of new sheet metal and alloy materials, master various processing parameters, enhance stamping quality, and resolve production issues	4	3
			106418L3 Perform secondary processing of metal stamping and sheet metal parts to meet product application requirements	3	3
			106520L4 Perform metal heat treatment and surface modification, meet product application requirements	4	3
			106420L3 Perform mechanical surface treatment to metal products to meet application requirements	3	3
			106424L3 Conduct marking processing to metal products to meet application requirements	3	3
			106439L3 Apply basic metal material knowledge, to select material in suitable types and specifications for metal products to achieve required functionality	3	3
			Minimum 6 years of functional area relevant experience is recommended Minimum 2 years of metal stamping and sheet metal senior technician or equivalent experience is recommended		

Functional Area	Product Manufacturing				
Job Position	Senior Technician (Metal Stamping and Sheet Metal Industry)				
Job Description	Independently calibrate and operate equipment, perform metal stamping processing and various secondary processing, and carry out basic equipment maintenance				
Core Competency Level and Credit (for reference)	Level 3 (33 credits)				
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency		
			Code	Level	Credit
		Calibrate equipment, perform metal stamping and resolve production issues, and collect manufacturing data in real time	106415L3 Adjust stamping equipment, perform various forms of stamping processes, resolve production problems, and improve product quality	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
		Carry out secondary processing and surface treatment of metal stamping and sheet metal products, and implement quality improvement	106416L3 Perform metal pipe and wire forming to meet product application requirements	3	3
			106417L3 Perform sheet metal continuous / transfer stamping to meet product application requirements	3	3
			106516L4 Perform non-traditional and special sheet metal processing, meet product application requirements	4	3
			106517L4 Perform stamping processing of new sheet metal and alloy materials, master various processing parameters, enhance stamping quality, and resolve production issues	4	3
			106418L3 Perform secondary processing of metal stamping and sheet metal parts to meet product application requirements	3	3
			106520L4 Perform metal heat treatment and surface modification, meet product application requirements	4	3
			106420L3 Perform mechanical surface treatment to metal products to meet application requirements	3	3
			106424L3 Conduct marking processing to metal products to meet application requirements	3	3
			106439L3 Apply basic metal material knowledge, to select material in suitable types and specifications for metal products to achieve required functionality	3	3
			106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2	3
	Additional	Perform metal stamping and sheet metal product processing, and carry out production in accordance with	106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2	3

		occupational safety and health and environmental protection requirements	106375L2 Operate sheet metal stamping equipment, perform processing to meet product application requirements	2	4
Minimum 6 years of functional area relevant experience is recommended Minimum 2 years of metal stamping and sheet metal technician or equivalent experience is recommended					

Functional Area	Product Manufacturing				
Job Position	Technician (Metal Stamping and Sheet Metal Industry)				
Job Description	Independently calibrate and operate equipment, perform stamping processing, and carry out basic equipment maintenance				
Core Competency Level and Credit (for reference)	Level 3 (15 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Calibrate equipment, perform metal stamping and resolve production issues, and collect manufacturing data in real time	106415L3 Adjust stamping equipment, perform various forms of stamping processes, resolve production problems, and improve product quality	3	3
			106416L3 Perform metal pipe and wire forming to meet product application requirements	3	3
			106417L3 Perform sheet metal continuous / transfer stamping to meet product application requirements	3	3
			106439L3 Apply basic metal material knowledge, to select material in suitable types and specifications for metal products to achieve required functionality	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
			Additional Competency	Conduct metal stamping and sheet metal product processing, and comply with occupational safety, health and environmental protection regulations and measures	106375L2 Operate sheet metal stamping equipment, perform processing to meet product application requirements
	106368L1 Understand methods of usage of various common basic hand tools and use them correctly to assist in production	1			3
	106369L1 Assist production and provide effective production support	1			3
	106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2			3
	Minimum 5 years of functional area relevant experience is recommended				
	Minimum 2 years of metal stamping and sheet metal operator or equivalent experience is recommended				

Functional Area	Product Manufacturing				
Job Position	Operator (Metal Stamping and Sheet Metal Industry)				
Job Description	Operate stamping equipment, perform processing, and carry out basic equipment maintenance				
Core Competency Level and Credit (for reference)	Level 2 (13 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Perform metal stamping and sheet metal product processing, and carry out production in accordance with occupational safety, health and environmental protection requirements	106375L2 Operate sheet metal stamping equipment, perform processing to meet product application requirements	2	4
			106368L1 Understand methods of usage of various common basic hand tools and use them correctly to assist in production	1	3
			106369L1 Assist production and provide effective production support	1	3
			106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2	3
	Additional	Perform product packaging	106438L3 Conduct product and semi-finished product packaging to meet product application requirements	3	3
Minimum 3 years of functional area relevant experience is recommended					

Functional Area	Product Manufacturing				
Job Position	Production Data Assistant Analyst / Engineer (Metal Stamping and Sheet Metal Industry)				
Job Description	Analyse production data of metal stamping processing, propose suggestions for improving production efficiency, monitor the implementation of accepted suggestions, and continuously improve production based on real-time data				
Core Competency Level and Credit (for reference)	Level 4 (28 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Master commonly used data analysis methods, follow up on various production indicators (include capacity, equipment utilisation, etc.), make accurate judgments on production data, and analyse data from the digital dashboard to ensure the implementation of digital production	111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Report to management and provide timely recommendations based on the real-time situation of metal stamping and sheet metal processing, to enhance production efficiency	106415L3 Adjust stamping equipment, perform various forms of stamping processes, resolve production problems, and improve product quality	3	3
			106417L3 Perform sheet metal continuous / transfer stamping to meet product application requirements	3	3
			111575L4 Implement digitalisation of metal stamping and sheet metal processing equipment and related configurations, provide real-time visualisation dashboards for production status in metal stamping and sheet metal processing workshops	4	6
	Additional Competency	Maintain and monitor the digital dashboard, report abnormal situations to management, and carry out lean production based on collected data to reduce waste and defects. Monitor the network security of the production data system	111559L3 Apply "Industry 4.0" digital lean principles and use real-time data collected from relevant departments, initially identify wasteful processes or procedures throughout enterprise's value chain, enable focused operational improvements and lean practices within corresponding departments	3	6
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3

		Monitor whether the data collection at each stage of the production site for metal stamping and sheet metal processing is operating normally, and ensure that the data displayed on the digital dashboard is accurate and reliable	111570L3 Operate and maintain data acquisition equipment and systems for metal stamping and sheet metal product production; store, manage, and assist in analysis of digital production data for metal stamping and sheet metal products	3	3
Minimum 6 years of functional area relevant experience is recommended Minimum 2 years of metal stamping and sheet metal production digital data administrator or equivalent experience is recommended					

Functional Area	Product Manufacturing					
Job Position	Production Digital Data Administrator (Metal Stamping and Sheet Metal Industry)					
Job Description	Collect real-time production data from various metal stamping processing operations, carry out lean production, monitor the accuracy of the data, and ensure the network security of the production data system					
Core Competency Level and Credit (for reference)	Level 3 (15 credits)					
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency			
			Code		Level	Credit
	Core Competency	Maintain and monitor the digital dashboard, report abnormal situations to management, and carry out lean production based on collected data to reduce waste and defects. Monitor the network security of the production data system	111559L3 Apply "Industry 4.0" digital lean principles and use real-time data collected from relevant departments, initially identify wasteful processes or procedures throughout enterprise's value chain, enable focused operational improvements and lean practices within corresponding departments	3	6	
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3	
			Monitor whether the data collection at each stage of the production site for metal stamping and sheet metal processing is operating normally, and ensure that the data displayed on the digital dashboard is accurate and reliable	106415L3 Adjust stamping equipment, perform various forms of stamping processes, resolve production problems, and improve product quality	3	3
				111570L3 Operate and maintain data acquisition equipment and systems for metal stamping and sheet metal product production; store, manage, and assist in analysis of digital production data for metal stamping and sheet metal products	3	3
Minimum 5 years of functional area relevant experience is recommended						

Branches

Electroplating Industry

Functional area

Product Manufacturing

Role

QF
Level

Level 5

**Production
Manager**

Level 4

**Production
Supervisor**

**Production Data
Assistant Analyst /
Engineer**

Level 3

Senior Technician

**Production Digital
Data Administrator**

Level 2

Technician

Operator

Functional Area	Product Manufacturing				
Job Position	Production Manager (Electroplating Industry)				
Job Description	1. Carry out production according to the production plan, implement factory management to resolve various production problems 2. Continuously improve factory environment and promote factory quality management according to enterprise requirements for human resources, security, crisis management, knowledge management, and corporate governance etc.				
Core Competency Level and Credit (for reference)	Level 5 (25 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Code
	Core Competency	Perform production management across all workshops in the factory, supervise production and equipment maintenance, monitor and mitigate production risks	106562L5 Implement workplace risk management to ensure the safety of employees and customers, and reduce operational and financial risks for business	5	3
			106458L5 Implement factory management to improve production efficiency and monitor the timely completion of production plans	5	5
			106459L4 Establish and maintain dust-free workshop production, ensure workshop cleanliness and product quality	4	3
			106460L4 Monitor and supervise operation and maintenance of production equipment, reduce rate of equipment failures, and ensure normal operation of production equipment	4	4
		Continuously collect and analyse production and quality data to maintain production stability, improve efficiency and product quality	106561L5 Continuously improve factory environment and promote factory quality management, optimise occupational health and safety management, and improve production and operational efficiency	5	5
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Supervise production and formulate production plans, balance production line, manage production line equipment and tools to ensure safe and smooth production process, analyse production data	106384L3 Supervise production to ensure timely completion and achievement of original quality requirements under all predictable and regular conditions	3	3
			106454L4 Establish and maintain equipment / tool management system, align with enterprise's development needs, and improve production efficiency and stability	4	3
			106461L4 Conduct occupational safety and health (OSH) risk assessments, assist identify and record potential risks, reduce or eliminate OSH hazards	4	4
		Arrange and adjust production plan, balance production line	106397L3 Arrange production plans and promptly fulfill all original and adjusted production needs	3	3

			106501L4 Balance production line, avoid local bottlenecks, improve overall production efficiency	4	4
		Master common data analysis methods, track various production indicators (include capacity, equipment utilisation, etc.), make accurate judgments on production data. Analyse data from digital dashboards to enable implementation of digital production	111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
		Provide timely report and suggestion to management to improve production efficiency in response to real-time production status of surface treatment processes	106521L4 Perform advanced electroplating processes, to meet product application requirements	4	3
			106522L4 Perform advanced painting processes, to meet product application requirements	4	3
			111576L4 Implement digitalisation of surface treatment processing equipment and related configurations, and provide real-time visualisation dashboards for production status in surface treatment processing workshops	4	6
			106421L3 Adjust equipment, perform electroplating, resolve production issues, and improve product quality	3	3
			106423L3 Adjust equipment, perform coating, resolve production issues, and improve product quality	3	3
Minimum 7 years of functional area relevant experience is recommended					
Minimum 2 years of electroplating production supervisor, production data assistant analyst / engineer or equivalent experience is recommended					

Functional Area	Product Manufacturing				
Job Position	Production Supervisor (Electroplating Industry)				
Job Description	1. Carry out plant management, supervise production progress, and monitor the status of production equipment 2. Balance production and make adjustments, reasonably arrange equipment and surrounding facilities				
Core Competency Level and Credit (for reference)	Level 4 (22 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code		Level
	Core Competency	Conduct production supervision, manage production line equipment and tools to ensure a safe and smooth production process, and perform production data analysis	106384L3 Supervise production to ensure timely completion and achievement of original quality requirements under all predictable and regular conditions	3	3
			106461L4 Conduct occupational safety and health (OSH) risk assessments, assist identify and record potential risks, reduce or eliminate OSH hazards	4	3
			106454L4 Establish and maintain equipment / tool management system, align with enterprise’s development needs, and improve production efficiency and stability	4	4
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Schedule and adjust production plans, and balance the production line	106397L3 Arrange production plans and promptly fulfill all original and adjusted production needs	3	3
			106501L4 Balance production line, avoid local bottlenecks, improve overall production efficiency	4	4
	Additional Competence	Perform advanced metal plating processing and collect production data in real time	106521L4 Perform advanced electroplating processes, to meet product application requirements	4	4
			106439L3 Apply basic metal material knowledge, to select material in suitable types and specifications for metal products to achieve required functionality	3	3
			Minimum 6 years of functional area relevant experience is recommended Minimum 2 years of electroplating senior technician or equivalent experience is recommended		

Functional Area	Product Manufacturing				
Job Position	Senior Technician (Electroplating Industry)				
Job Description	Perform metal plating processing and carry out basic equipment maintenance				
Core Competency Level and Credit (for reference)	Level 3 (9 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Perform advanced metal plating processing and collect production data in real time	106521L4 Perform advanced electroplating processes, to meet product application requirements	4	3
			106439L3 Apply basic metal material knowledge, to select material in suitable types and specifications for metal products to achieve required functionality	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
	Additional Competency	Adjust equipment, perform metal plating, resolve production issues, and collect production data in real time	106421L3 Adjust equipment, perform electroplating, resolve production issues, and improve product quality	3	3
			106422L3 Adjust equipment and perform ion plating surface treatment to improve product quality	3	4
			106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2	3
	Minimum 6 years of functional area relevant experience is recommended				
	Minimum 2 years of electroplating junior technician or equivalent experience is recommended				

Functional Area	Product Manufacturing					
Job Position	Technician (Electroplating Industry)					
Job Description	Independently calibrate and operate equipment, perform plating processing, and carry out basic equipment maintenance					
Core Competency Level and Credit (for reference)	Level 3 (13 credits)					
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties Calibrate equipment, perform metal plating and resolve production issues, and collect production data in real time	Unit of Competency			
			Code		Level	Credit
			106421L3 Adjust equipment, perform electroplating, resolve production issues, and improve product quality		3	3
			106422L3 Adjust equipment and perform ion plating surface treatment to improve product quality		3	4
			106439L3 Apply basic metal material knowledge, to select material in suitable types and specifications for metal products to achieve required functionality		3	3
	Additional Competency	Perform metal plating product processing, and carry out production in accordance with occupational safety and health and environmental protection requirements	111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations		3	3
			106378L2 Operate metal electroplating equipment, perform processing to meet product application requirements		2	4
			106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations		2	3
			106368L1 Understand methods of usage of various common basic hand tools and use them correctly to assist in production		1	3
			106369L1 Assist production and provide effective production support		1	3

Minimum 5 years of functional area relevant experience is recommended

Minimum 2 years of electroplating operator or equivalent experience is recommended

Functional Area	Product Manufacturing				
Job Position	Operator (Electroplating Industry)				
Job Description	Operate plating equipment, perform processing, and carry out basic equipment maintenance				
Core Competency Level and Credit (for reference)	Level 2 (13 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Perform metal plating product processing, and carry out production in accordance with occupational safety and health and environmental protection requirements	106378L2 Operate metal electroplating equipment, perform processing to meet product application requirements	2	4
			106368L1 Understand methods of usage of various common basic hand tools and use them correctly to assist in production	1	3
			106369L1 Assist production and provide effective production support	1	3
			106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2	3
	Additional	Perform product packaging	106438L3 Conduct product and semi-finished product packaging to meet product application requirements	3	3
Minimum 3 years of functional area relevant experience is recommended					

Functional Area	Product Manufacturing				
Job Position	Production Data Assistant Analyst / Engineer (Surface Treatment Industry)				
Job Description	Analyse production data of surface treatment processing, propose suggestions for improving production efficiency, monitor the implementation of accepted suggestions, and continuously improve production based on real-time data				
Core Competency Level and Credit (for reference)	Level 4 (34 credits)				
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency		
			Code	Level	Credit
		Master commonly used data analysis methods, follow up on various production indicators (include capacity, equipment utilisation, etc.), make accurate judgments on production data, and analyse data from the digital dashboard to ensure the implementation of digital production	111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Based on the real-time situation of surface treatment processing production, report to management and provide timely recommendations to enhance production efficiency	106521L4 Perform advanced electroplating processes, to meet product application requirements	4	3
			106522L4 Perform advanced painting processes, to meet product application requirements	4	3
			111576L4 Implement digitalisation of surface treatment processing equipment and related configurations, and provide real-time visualisation dashboards for production status in surface treatment processing workshops	4	6
			106421L3 Adjust equipment, perform electroplating, resolve production issues, and improve product quality	3	3
			106423L3 Adjust equipment, perform coating, resolve production issues, and improve product quality	3	3
	Additional Competency	Maintain and monitor the digital dashboard, report abnormal situations to management, and carry out lean production based on collected data to reduce waste and defects. Monitor the	111559L3 Apply "Industry 4.0" digital lean principles and use real-time data collected from relevant departments, initially identify wasteful processes or procedures throughout enterprise's value chain, enable focused operational improvements and lean practices within corresponding departments	3	6

		network security of the production data system	111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
		Monitor the data collection at each stage of the production site for surface treatment processing to ensure normal operation, and ensure that the data displayed on the digital dashboard is accurate and reliable	111571L3 Operate and maintain data collection equipment and systems for surface treatment and processing product manufacturing; store, manage, and assist in analysis of digital production data in metal surface treatment and processing	3	3
Minimum 6 years of functional area relevant experience is recommended					
Minimum 2 years of surface treatment production digital data administrator or equivalent experience is recommended					

Functional Area	Product Manufacturing						
Job Position	Production Digital Data Administrator (Surface Treatment Industry)						
Job Description	Collect real-time production data from various surface treatment processing operations, carry out lean production, monitor the accuracy of the data, and ensure the network security of the production data system						
Core Competency Level and Credit (for reference)	Level 3 (15 credits)						
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency				
			Code		Level	Credit	
	Core Competency	Maintain and monitor the digital dashboard, report abnormal situations to management, and carry out lean production based on collected data to reduce waste and defects. Monitor the network security of the production data system	111559L3 Apply "Industry 4.0" digital lean principles and use real-time data collected from relevant departments, initially identify wasteful processes or procedures throughout enterprise's value chain, enable focused operational improvements and lean practices within corresponding departments		3	6	
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations		3	3	
			Monitor the data collection at each stage of the production site for surface treatment processing to ensure normal operation, and ensure that the data displayed on the digital dashboard is accurate and reliable	106421L3 Adjust equipment, perform electroplating, resolve production issues, and improve product quality		3	3
				111571L3 Operate and maintain data collection equipment and systems for surface treatment and processing product manufacturing; store, manage, and assist in analysis of digital production data in metal surface treatment and processing		3	3
Minimum 5 years of functional area relevant experience is recommended							

Branches **Painting and Printing Industry**

Functional area **Product Manufacturing**

Role

QF
Level

Level 5

**Production
Manager**

Level 4

**Production
Supervisor**

**Production Data
Assistant Analyst /
Engineer**

Level 3

Senior Technician

**Production Digital
Data Administrator**

Technician

Level 2

Operator

Functional Area	Product Manufacturing				
Job Position	Production Manager (Painting and Printing Industry)				
Job Description	1. Carry out production according to the production plan, implement factory management to resolve various production problems 2. Continuously improve factory environment and promote factory quality management according to enterprise requirements for human resources, security, crisis management, knowledge management, and corporate governance etc.				
Core Competency Level and Credit (for reference)	Level 5 (25 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Code
	Core Competency	Perform production management across all workshops in the factory, supervise production and equipment maintenance, monitor and mitigate production risks	106562L5 Implement workplace risk management to ensure the safety of employees and customers, and reduce operational and financial risks for business	5	3
			106458L5 Implement factory management to improve production efficiency and monitor the timely completion of production plans	5	5
			106459L4 Establish and maintain dust-free workshop production, ensure workshop cleanliness and product quality	4	3
			106460L4 Monitor and supervise operation and maintenance of production equipment, reduce rate of equipment failures, and ensure normal operation of production equipment	4	4
		Continuously collect and analyse production and quality data to maintain production stability, improve efficiency and product quality	106561L5 Continuously improve factory environment and promote factory quality management, optimise occupational health and safety management, and improve production and operational efficiency	5	5
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Supervise production and formulate production plans, balance production line, manage production line equipment and tools to ensure safe and smooth production process, analyse production data	106384L3 Supervise production to ensure timely completion and achievement of original quality requirements under all predictable and regular conditions	3	3
			106454L4 Establish and maintain equipment / tool management system, align with enterprise's development needs, and improve production efficiency and stability	4	3
			106461L4 Conduct occupational safety and health (OSH) risk assessments, assist identify and record potential risks, reduce or eliminate OSH hazards	4	4
		Arrange and adjust production plan, balance production line	106397L3 Arrange production plans and promptly fulfill all original and adjusted production needs	3	3

			106501L4 Balance production line, avoid local bottlenecks, improve overall production efficiency	4	4
		Master common data analysis methods, track various production indicators (include capacity, equipment utilisation, etc.), make accurate judgments on production data. Analyse data from digital dashboards to enable implementation of digital production	111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
		Provide timely report and suggestion to management to improve production efficiency in response to real-time production status of surface treatment processes	106521L4 Perform advanced electroplating processes, to meet product application requirements	4	3
			106522L4 Perform advanced painting processes, to meet product application requirements	4	3
			111576L4 Implement digitalisation of surface treatment processing equipment and related configurations, and provide real-time visualisation dashboards for production status in surface treatment processing workshops	4	6
			106421L3 Adjust equipment, perform electroplating, resolve production issues, and improve product quality	3	3
			106423L3 Adjust equipment, perform coating, resolve production issues, and improve product quality	3	3
		Minimum 7 years of functional area relevant experience is recommended			
		Minimum 2 years of painting and printing production supervisor, production data assistant analyst / engineer or equivalent experience is recommended			

Functional Area	Product Manufacturing				
Job Position	Production Supervisor (Painting and Printing Industry)				
Job Description	1. Carry out plant management, supervise production progress, and monitor the status of production equipment 2. Balance production and make adjustments, reasonably arrange equipment and surrounding facilities				
Core Competency Level and Credit (for reference)	Level 4 (22 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Conduct production supervision, manage production line equipment and tools to ensure a safe and smooth production process, and perform production data analysis	106384L3 Supervise production to ensure timely completion and achievement of original quality requirements under all predictable and regular conditions	3	3
			106461L4 Conduct occupational safety and health (OSH) risk assessments, assist identify and record potential risks, reduce or eliminate OSH hazards	4	3
			106454L4 Establish and maintain equipment / tool management system, align with enterprise’s development needs, and improve production efficiency and stability	4	4
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Schedule and adjust production plans, and balance the production line	106397L3 Arrange production plans and promptly fulfill all original and adjusted production needs	3	3
			106501L4 Balance production line, avoid local bottlenecks, improve overall production efficiency	4	4
	Additional Competency	Perform metal coating processing and collect production data in real time	106522L4 Perform advanced painting processes, to meet product application requirements	4	3
			106425L3 Conduct printing processing to products to meet application requirements	3	3
			106439L3 Apply basic metal material knowledge, to select material in suitable types and specifications for metal products to achieve required functionality	3	3
			Minimum 6 years of functional area relevant experience is recommended Minimum 2 years of painting and printing senior technician or equivalent experience is recommended		

Functional Area	Product Manufacturing				
Job Position	Senior Technician (Painting and Printing Industry)				
Job Description	Perform advanced coating processing and surface printing processing, and perform basic equipment maintenance				
Core Competency Level and Credit (for reference)	Level 3 (12 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Perform metal coating processing and collect production data in real time	106522L4 Perform advanced painting processes, to meet product application requirements	4	3
			106425L3 Conduct printing processing to products to meet application requirements	3	3
			106439L3 Apply basic metal material knowledge, to select material in suitable types and specifications for metal products to achieve required functionality	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
	Additional Competency	Perform coating processing and conduct production in compliance with occupational safety, health and environmental protection requirements	106423L3 Adjust equipment, perform coating, resolve production issues, and improve product quality	3	3
			106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2	3
	Minimum 6 years of functional area relevant experience is recommended				
Minimum 2 years of painting and printing technician or equivalent experience is recommended					

Functional Area	Product Manufacturing					
Job Position	Technician (Painting and Printing Industry)					
Job Description	Independently calibrate and operate equipment, perform coating and printing processing, and perform basic equipment maintenance					
Core Competency Level and Credit (for reference)	Level 3 (12 credits)					
Main Duties, Units of Competency and Functional Areas	Core Competency	Calibrate equipment, perform metal coating and resolve production issues, and collect production data in real time	Unit of Competency			
			Code		Level	Credit
			106423L3 Adjust equipment, perform coating, resolve production issues, and improve product quality		3	3
			106425L3 Conduct printing processing to products to meet application requirements		3	3
			106439L3 Apply basic metal material knowledge, to select material in suitable types and specifications for metal products to achieve required functionality		3	3
	Additional Competency	Perform metal coating processing and conduct production in accordance with occupational safety and health and environmental protection requirements	111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations		3	3
			106379L2 Operate coating equipment, perform processing to meet product application requirements		2	4
			106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations		2	3
			106368L1 Understand methods of usage of various common basic hand tools and use them correctly to assist in production		1	3
			106369L1 Assist production and provide effective production support		1	3
Minimum 5 years of functional area relevant experience is recommended						
Minimum 2 years of painting and printing operator or equivalent experience is recommended						

Functional Area	Product Manufacturing				
Job Position	Operator (Painting and Printing Industry)				
Job Description	Operate coating equipment, perform processing, and carry out basic equipment maintenance				
Core Competency Level and Credit (for reference)	Level 2 (13 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Perform metal coating processing and conduct production in accordance with occupational safety and health and environmental protection requirements	106379L2 Operate coating equipment, perform processing to meet product application requirements	2	4
			106368L1 Understand methods of usage of various common basic hand tools and use them correctly to assist in production	1	3
			106369L1 Assist production and provide effective production support	1	3
			106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2	3
	Additional	Package products and semi-finished goods	106438L3 Conduct product and semi-finished product packaging to meet product application requirements	3	3
Minimum 3 years of functional area relevant experience is recommended					

Functional Area	Product Manufacturing				
Job Position	Production Data Assistant Analyst / Engineer (Surface Treatment Industry)				
Job Description	Analyse production data of surface treatment processing, propose suggestions for improving production efficiency, monitor the implementation of accepted suggestions, and continuously improve production based on real-time data				
Core Competency Level and Credit (for reference)	Level 4 (34 credits)				
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency		
			Code	Level	Credit
		Master commonly used data analysis methods, follow up on various production indicators (include capacity, equipment utilisation, etc.), make accurate judgments on production data, and analyse data from the digital dashboard to ensure the implementation of digital production	111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Based on the real-time situation of surface treatment processing production, report to management and provide timely recommendations to enhance production efficiency	106521L4 Perform advanced electroplating processes, to meet product application requirements	4	3
			106522L4 Perform advanced painting processes, to meet product application requirements	4	3
			111576L4 Implement digitalisation of surface treatment processing equipment and related configurations, and provide real-time visualisation dashboards for production status in surface treatment processing workshops	4	6
			106421L3 Adjust equipment, perform electroplating, resolve production issues, and improve product quality	3	3
			106423L3 Adjust equipment, perform coating, resolve production issues, and improve product quality	3	3
	Additional Competency	Maintain and monitor the digital dashboard, report abnormal situations to management, and carry out lean production based on collected data to reduce waste and defects. Monitor the	111559L3 Apply "Industry 4.0" digital lean principles and use real-time data collected from relevant departments, initially identify wasteful processes or procedures throughout enterprise's value chain, enable focused operational improvements and lean practices within corresponding departments	3	6

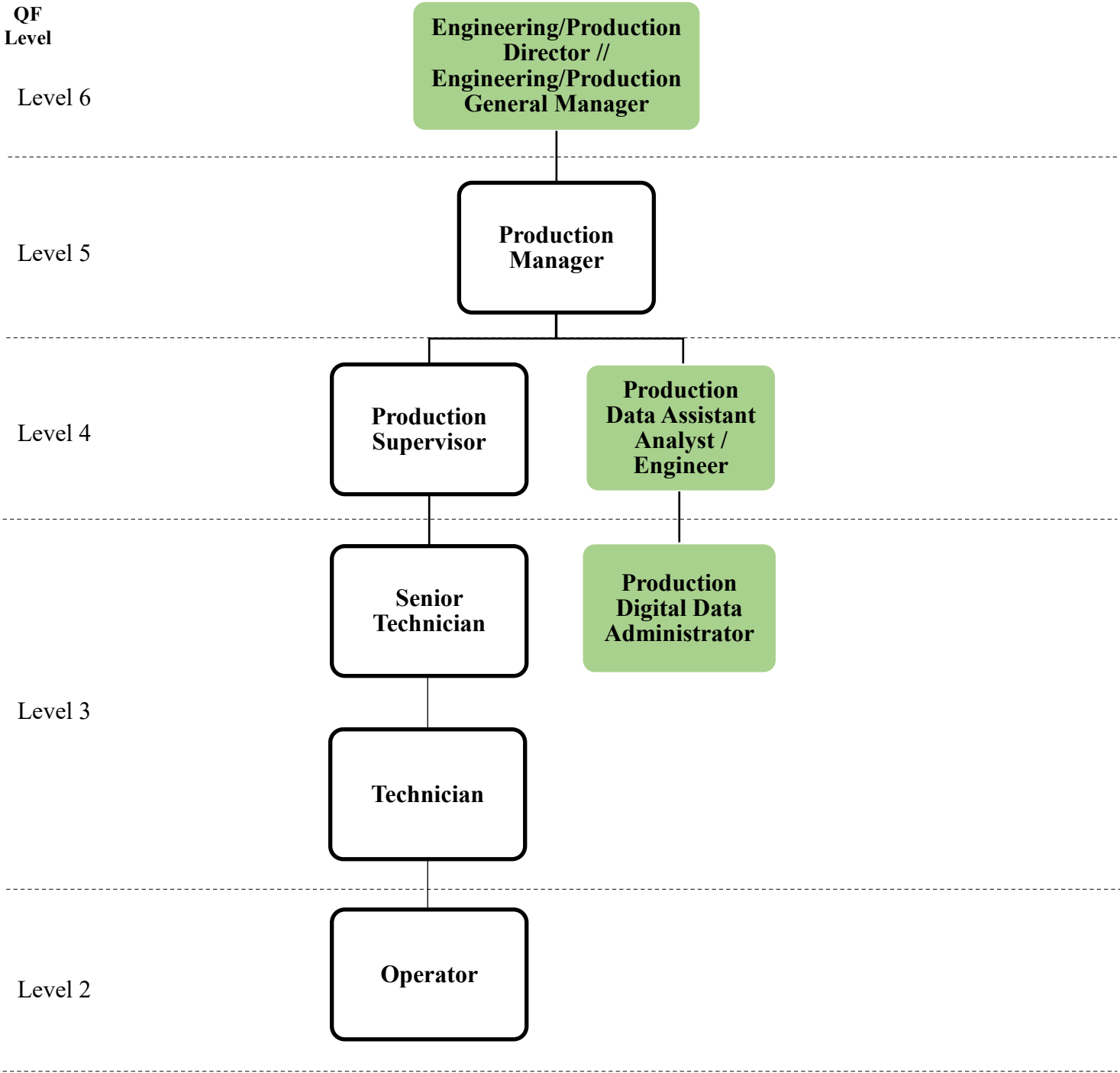
		network security of the production data system	111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
		Monitor the data collection at each stage of the production site for surface treatment processing to ensure normal operation, and ensure that the data displayed on the digital dashboard is accurate and reliable	111571L3 Operate and maintain data collection equipment and systems for surface treatment and processing product manufacturing; store, manage, and assist in analysis of digital production data in metal surface treatment and processing	3	3
Minimum 6 years of functional area relevant experience is recommended					
Minimum 2 years of surface treatment production digital data administrator or equivalent experience is recommended					

Functional Area	Product Manufacturing					
Job Position	Production Digital Data Administrator (Surface Treatment Industry)					
Job Description	Collect real-time production data from various surface treatment processing operations, carry out lean production, monitor the accuracy of the data, and ensure the network security of the production data system					
Core Competency Level and Credit (for reference)	Level 3 (15 credits)					
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency			
			Code	Level	Credit	
		Maintain and monitor the digital dashboard, report abnormal situations to management, and carry out lean production based on collected data to reduce waste and defects. Monitor the network security of the production data system	111559L3 Apply "Industry 4.0” digital lean principles and use real-time data collected from relevant departments, initially identify wasteful processes or procedures throughout enterprise’s value chain, enable focused operational improvements and lean practices within corresponding departments	3	6	
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3	
			Monitor the data collection at each stage of the production site for surface treatment processing to ensure normal operation, and ensure that the data displayed on the digital dashboard is accurate and reliable	106423L3 Adjust equipment, perform coating, resolve production issues, and improve product quality	3	3
				111571L3 Operate and maintain data collection equipment and systems for surface treatment and processing product manufacturing; store, manage, and assist in analysis of digital production data in metal surface treatment and processing	3	3
Minimum 5 years of functional area relevant experience is recommended						

Branches **Plastics Industry**

Functional area **Product Manufacturing**

Role



Functional Area	Product Manufacturing				
Job Position	Engineering / Production Director // Engineering / Production General Manager (Plastics Industry)				
Job Description	Plan plastic product design and formulate strategies to refine its manufacturing processes and production techniques, optimise production, drive improvements in plastic product functionality and reduce costs. Anticipate the equipment, technologies and systems required for the enterprise's future development. Promote digitalised operations across design, process and production domains				
Core Competency Level and Credit (for reference)	Level 6 (64 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Develop strategies for plastic product, process, project management and production technology development, manage and optimise operations, implement automation, and enhance design and production efficiency	106605L6 Formulate enterprise development strategies, consider cultural conditions of both domestic and international markets and results of competitive analysis, and formulate medium-and long-term development goals and measures for enterprise	6	4
			106601L6 Develop risk management strategies to reduce and avoid risks based on the enterprise's long-term development goals and actual operating conditions	6	4
			106604L6 Establish and maintain quality management system to enhance competitiveness and positive image of enterprise through quality management	6	6
			106582L6 Manage product development knowledge and continuously improve product design quality and efficiency	6	3
			106548L5 Develop project management strategies to ensure projects are implemented with appropriate resources and completed in timely and effective manner	6	3
			106585L5 Design and plan plastic product manufacturing process to ensure costs, environmental protection, product functionality, and appearance meet standards	5	5
			106586L6 Plan and set up automation systems to improve level of automated manufacturing in enterprises	6	5
			106561L5 Continuously improve factory environment and promote factory quality management, optimise occupational health and safety management, and improve production and operational efficiency	5	5
			111556L6 Establish "Industry 4.0" architecture to interconnect devices within enterprise, achieve single data source, uncover useful data, and assist enterprise in digital transformation and comprehensive operational improvements	6	6
		Establish digital data management system based on "Industry 4.0" in product design, process development, and production sector; analyse data application areas, integrate data, improve			

		product design, processes, and production efficiency	111557L6 Analyse application areas of “Industry 4.0”, helps enterprise to conduct data-driven and intelligent operations in appropriate areas and continuously improve efficiency	6	5
			111552L5 Implement “Industry 4.0” vertical and horizontal integration and connecting various departments and levels within enterprise to achieve data interconnection and interoperability, comprehensive digital transformation can be realised	5	6
			106587L5 Manage process design knowledge, standardise it, and continuously improve the process	5	6
			111551L4 To implement and apply “Industry 4.0”, understand the scope, departments, necessary tools and facilities for “Industry 4.0” implementation, and identify the various data on the dashboard for monitoring and preliminary analysis.	4	5
	Additional Competency	Plan product manufacturing, include concepts, environmental protection, life cycle, and intellectual property protection	106560L5 Conduct eco-friendly product design and lifecycle management to continuously reduce environmental impact of products throughout their entire lifecycle, from manufacturing, usage and end-of-life disposal	5	6
			106574L5 Identify constraints on human, machine, and material resources to develop products	5	3
			106581L5 Protect enterprise intellectual property right through conduct various design registrations, maintain confidentiality, and undergo review	5	3
		Establish product manufacturing system to enable parallel development of individual product components and continuously improve product development efficiency	106575L5 Apply and monitor product data management and engineering change network systems, to enable parallel development and design of different product components	5	4
		Develop project management strategies, assess risks, and promote data-driven project management	106580L5 Conduct risk management for product development projects, formulate effective contingency and emergency response measures	5	3
		Perform factory management, monitor and supervise production equipment to improve product quality, manage workplace risks to improve factory environment, and quantify risk data	106458L5 Implement factory management to improve production efficiency and monitor the timely completion of production plans	5	5
			106460L4 Monitor and supervise the operation and maintenance of production equipment to reduce failure rates and ensure normal operation of production equipment	4	4
			106562L5 Implement workplace risk management to ensure the safety of employees and customers, and reduce operational and financial risks for business	5	3

Minimum 10 years of functional area relevant experience is recommended

Minimum 5 years of plastic production manager or equivalent experience is recommended

Functional Area	Product Manufacturing				
Job Position	Production Manager (Plastics Industry)				
Job Description	1. Carry out production according to the production plan, implement factory management to resolve various production problems 2. Continuously improve factory environment and promote factory quality management according to enterprise requirements for human resources, security, crisis management, knowledge management, and corporate governance etc.				
Core Competency Level and Credit (for reference)	Level 5 (22 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Code
	Core Competency	Manage production across all workshops in the factory, supervise production and equipment maintenance, and monitor and mitigate production risks	106562L5 Implement workplace risk management to ensure the safety of employees and customers, and reduce operational and financial risks for business	5	3
			106458L5 Implement factory management to improve production efficiency and monitor the timely completion of production plans	5	5
			106460L4 Protect enterprise intellectual property right through conduct various design registrations, maintain confidentiality, and undergo review	4	4
		Continuously collect and analyse production and quality data to maintain production stability and improve efficiency and product quality	106561L5 Continuously improve factory environment and promote factory quality management, optimise occupational health and safety management, and improve production and operational efficiency	5	5
			111551L4 To implement and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for Industry 4.0 implementation, and identify the various data on the dashboard for monitoring and preliminary analysis.	4	5
	Additional Competency	Supervise production operations, manage production line equipment and tools, ensure process safety and continuity, and conduct production data analysis	106384L3 Supervise production to ensure timely completion and achievement of original quality requirements under all predictable and regular conditions	3	3
			106461L4 Conduct occupational safety and health (OSH) risk assessments, assist identify and record potential risks, reduce or eliminate OSH hazards	4	3
			106454L4 Establish and maintain equipment/tool management system, align with enterprise's development needs, and improve production efficiency and stability	4	4
		Arrange and adjust production plans, and balance production lines	106397L3 Arrange production plans and promptly fulfill all original and adjusted production needs	3	3
			106501L4 Balance production line, avoid local bottlenecks, improve overall production efficiency	4	4

		Apply standard data analysis methods to monitor key production indicators (include capacity, equipment utilisation rate, etc.), interpret production data with precision, and utilise digital dashboards to facilitate data-driven manufacturing	111549L4 Establish and apply “Industry 4.0” enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			111550L4 Apply “Industry 4.0” implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
		Monitor real-time production conditions in plastic product manufacturing and furnish management with timely reports and recommendations to improve production efficiency	106523L4 Perform advanced plastic moulding and resolve production issues, master various processing parameters, and enhance injection moulding quality	4	4
			111577L4 Implement digitalisation of injection moulding and other plastic processing equipment and related configurations, and provide real-time visualisation dashboards for production status in injection moulding and other plastic processing workshops	4	6
Minimum 7 years of functional area relevant experience is recommended					
Minimum 2 years of plastic product design engineer or equivalent experience is recommended					

Functional Area	Product Manufacturing				
Job Position	Production Supervisor (Plastics Industry)				
Job Description	1. Carry out plant management, supervise production progress, and monitor the status of production equipment 2. Balance production and make adjustments, reasonably arrange equipment and surrounding facilities				
Core Competency Level and Credit (for reference)	Level 4 (22 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Conduct production supervision, manage production line equipment and tools to ensure a safe and smooth production process, and perform production data analysis	106384L3 Supervise production to ensure timely completion and achievement of original quality requirements under all predictable and regular conditions	3	3
			106461L4 Conduct occupational safety and health (OSH) risk assessments, assist identify and record potential risks, reduce or eliminate OSH hazards	4	3
			106454L4 Establish and maintain equipment / tool management system, align with enterprise's development needs, and improve production efficiency and stability	4	4
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Schedule and adjust production plans, and balance the production line	106397L3 Arrange production plans and promptly fulfill all original and adjusted production needs	3	3
			106501L4 Balance production line, avoid local bottlenecks, improve overall production efficiency	4	4
	Additional Competency	Calibrate equipment, perform plastic product production and processing, conduct defect analysis, and collect production data in real time	106426L3 Set parameters for traditional injection moulding equipment, assist in traditional injection moulding and defect analysis, to improve product quality	3	4
			106427L3 Set parameters for traditional plastic processing equipment, assist in traditional plastic processing and defect analysis, to improve product quality	3	4
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
		Perform plastic product moulding technology processing and other surface treatment and printing	106523L4 Perform advanced plastic moulding and resolve production issues, master various processing parameters, and enhance injection moulding quality	4	4
			106428L3 Conduct other forming process to plastic products to meet application requirements	3	4

			106524L4 Plan and implement in-plant plastic recycling, reduce plastic waste generation	4	6
			106525L4 Conduct plastic modification, develop appropriate preparation schemes, and meet various requirements	4	6
			106526L4 Select and process new plastics and composite materials, meet product application requirements	4	4
			106429L3 Conduct plastic colouring, correctly control plastic colour to meet customer requirements	3	4
			106430L3 Conduct pre-and post-processing of plastic products to meet application requirements	3	4
			106431L3 Conduct mechanical surface treatment to plastic products to meet product application requirements	3	4
			106432L3 Conduct plasma surface treatment to plastic products to meet application requirements	3	4
			106433L3 Conduct chemical surface treatment to plastic products to meet product application requirements	3	4
			106434L3 Conduct vacuum ion plating surface treatment to plastic products to meet application requirements	3	4
			106435L3 Conduct coating to plastic products to meet application requirements	3	4
			106436L3 Conduct in-mould decoration to plastic moulds to meet product application requirements	3	4
			106437L3 Conduct surface printing plastic products to meet product application requirements	3	4
			106440L3 Apply basic plastic material knowledge, to select material in suitable types and specifications for plastic products to achieve required functionality	3	3
			Minimum 6 years of functional area relevant experience is recommended		
			Minimum 2 years of plastic senior technician or equivalent experience is recommended		

Functional Area	Product Manufacturing				
Job Position	Senior Technician (Plastics Industry)				
Job Description	Independently calibrate and operate equipment, perform advanced plastic moulding processing and various new plastic and composite material moulding processing, and carry out basic equipment maintenance				
Core Competency Level and Credit (for reference)	Level 3 (74 credits)				
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency		
			Code	Level	Credit
		Calibrate equipment, perform plastic product production and processing, conduct defect analysis, and collect production data in real time	106426L3 Set parameters for traditional injection moulding equipment, assist in traditional injection moulding and defect analysis, to improve product quality	3	4
			106427L3 Set parameters for traditional plastic processing equipment, assist in traditional plastic processing and defect analysis, to improve product quality	3	4
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
		Perform plastic product moulding technology processing and other surface treatment and printing	106523L4 Perform advanced plastic moulding and resolve production issues, master various processing parameters, and enhance injection moulding quality	4	4
			106428L3 Conduct other forming process to plastic products to meet application requirements	3	4
			106524L4 Plan and implement in-plant plastic recycling, reduce plastic waste generation	4	6
			106525L4 Conduct plastic modification, develop appropriate preparation schemes, and meet various requirements	4	6
			106526L4 Select and process new plastics and composite materials, meet product application requirements	4	4
			106429L3 Conduct plastic colouring, correctly control plastic colour to meet customer requirements	3	4
			106430L3 Conduct pre-and post-processing of plastic products to meet application requirements	3	4
			106431L3 Conduct mechanical surface treatment to plastic products to meet product application requirements	3	4
			106432L3 Conduct plasma surface treatment to plastic products to meet application requirements	3	4

			106433L3 Conduct chemical surface treatment to plastic products to meet product application requirements	3	4
			106434L3 Conduct vacuum ion plating surface treatment to plastic products to meet application requirements	3	4
			106435L3 Conduct coating to plastic products to meet application requirements	3	4
			106436L3 Conduct in-mould decoration to plastic moulds to meet product application requirements	3	4
			106437L3 Conduct surface printing plastic products to meet product application requirements	3	4
			106440L3 Apply basic plastic material knowledge, to select material in suitable types and specifications for plastic products to achieve required functionality	3	3
			106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2	3
	Additional	Execute occupational safety and health operations and implement environmentally friendly production			
Minimum 6 years of functional area relevant experience is recommended					
Minimum 2 years of plastic technician or equivalent experience is recommended					

Functional Area	Product Manufacturing				
Job Position	Technician (Product Moulding) (Plastics Industry)				
Job Description	Independently calibrate and operate equipment, perform injection moulding and plastic processing, and carry out basic equipment maintenance				
Core Competency Level and Credit (for reference)	Level 3 (30 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code		Level
	Core Competency	Calibrate equipment, perform plastic product production and processing, conduct defect analysis, and collect production data in real time	106426L3 Set parameters for traditional injection moulding equipment, assist in traditional injection moulding and defect analysis, to improve product quality	3	4
			106427L3 Set parameters for traditional plastic processing equipment, assist in traditional plastic processing and defect analysis, to improve product quality	3	4
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
		Perform plastic product moulding technology processing and printing	106429L3 Conduct plastic colouring, correctly control plastic colour to meet customer requirements	3	4
			106430L3 Conduct pre-and post-processing of plastic products to meet application requirements	3	4
			106431L3 Conduct mechanical surface treatment to plastic products to meet product application requirements	3	4
			106524L4 Plan and implement in-plant plastic recycling, reduce plastic waste generation	4	6
			106440L3 Apply basic plastic material knowledge, to select material in suitable types and specifications for plastic products to achieve required functionality	3	3
	Additional	Execute occupational safety and health operations and implement environmentally friendly production	106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2	3

Minimum 5 years of functional area relevant experience is recommended

Minimum 2 years of plastic prodst moulding operator or equivalent experience is recommended

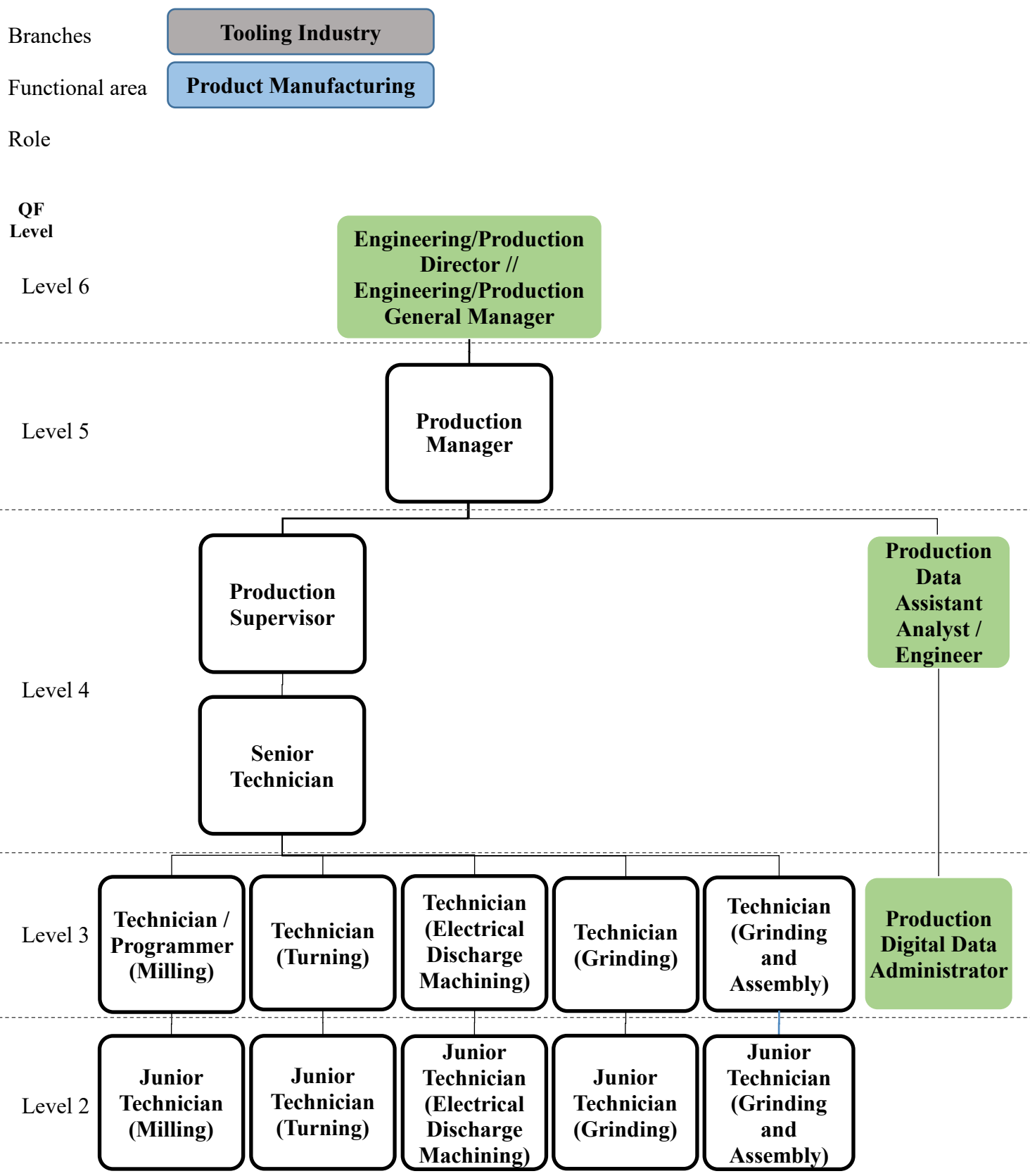
Functional Area	Product Manufacturing				
Job Position	Technician (Surface Treatment) (Plastics Industry)				
Job Description	Independently calibrate and operate equipment, perform injection moulding and plastic processing, and carry out basic equipment maintenance				
Core Competency Level and Credit (for reference)	Level 3 (30 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code		Level
	Core Competency	Perform surface treatment and printing of plastic products, and collect production data in real time	106432L3 Conduct plasma surface treatment to plastic products to meet application requirements	3	4
			106433L3 Conduct chemical surface treatment to plastic products to meet product application requirements	3	4
			106434L3 Conduct vacuum ion plating surface treatment to plastic products to meet application requirements	3	4
			106435L3 Conduct coating to plastic products to meet application requirements	3	4
			106436L3 Conduct in-mould decoration to plastic moulds to meet product application requirements	3	4
			106437L3 Conduct surface printing plastic products to meet product application requirements	3	4
			106440L3 Apply basic plastic material knowledge, to select material in suitable types and specifications for plastic products to achieve required functionality	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
			Additional	Execute occupational safety and health operations and implement environmentally friendly production	106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations
	Minimum 5 years of functional area relevant experience is recommended Minimum 2 years of plastic surface treatment operator or equivalent experience is recommended				

Functional Area	Product Manufacturing						
Job Position	Operator (Plastics Industry)						
Job Description	Perform mechanical surface treatment and carry out basic equipment maintenance						
Core Competency Level and Credit (for reference)	Level 2 (16 credits)						
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency				
			Code			Level	Credit
	Core Competency	Perform plastic product processing and carry out production in accordance with occupational safety, health and environmental protection	106368L1 Understand methods of usage of various common basic hand tools and use them correctly to assist in production			1	3
			106369L1 Assist production and provide effective production support			1	3
			106426L3 Set parameters for traditional injection moulding equipment, assist in traditional injection moulding and defect analysis, to improve product quality			3	4
			111568L2 Operate injection moulding equipment, perform processing products to meet application requirements			2	3
			106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations			2	3
	Additional	Perform product packaging	106438L3 Conduct product and semi-finished product packaging to meet product application requirements			3	3
	Minimum 3 years of functional area relevant experience is recommended						

Functional Area	Product Manufacturing				
Job Position	Production Data Assistant Analyst / Engineer (Plastics Industry)				
Job Description	Analyse various production data of plastic processing, propose suggestions for improving production efficiency, monitor the implementation of accepted suggestions, and continuously improve production based on real-time data				
Core Competency Level and Credit (for reference)	Level 4 (30 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Master commonly used data analysis methods, follow up on various production indicators (include capacity, equipment utilisation, etc.), make accurate judgments on production data, and analyse data from the digital dashboard to ensure the implementation of digital production	111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Respond to the real-time situation of plastic product production, report to management in a timely manner and provide recommendations to enhance production efficiency	106523L4 Perform advanced plastic moulding and resolve production issues, master various processing parameters, and enhance injection moulding quality	4	4
			111577L4 Implement digitalisation of injection moulding and other plastic processing equipment and related configurations, and provide real-time visualisation dashboards for production status in injection moulding and other plastic processing workshops	4	6
			106426L3 Set parameters for traditional injection moulding equipment, assist in traditional injection moulding and defect analysis, to improve product quality	3	4
	Additional Competency	Maintain and monitor the digital dashboard, report abnormal situations to management, and carry out lean production based on collected data to reduce waste and defects. Monitor the network security of the production data system	111559L3 Apply "Industry 4.0" digital lean principles and use real-time data collected from relevant departments, initially identify wasteful processes or procedures throughout enterprise's value chain, enable focused operational improvements and lean practices within corresponding departments	3	6
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3

		Monitor the data collection at each stage of the production site for plastic products to ensure normal operation, and ensure that the data displayed on the digital dashboard is accurate and reliable	111572L3 Operate and maintain intelligent data acquisition equipment and systems for plastic product manufacturing, store, manage, and assist in analysis of digital production data for plastic products	3	3
Minimum 6 years of functional area relevant experience is recommended Minimum 2 years of plastic production digital data administrator or equivalent experience is recommended					

Functional Area	Product Manufacturing					
Job Position	Production Digital Data Administrator (Plastics Industry)					
Job Description	Collect real-time production data from various plastic product processing operations, carry out lean production, monitor the accuracy of the data, and ensure the network security of the production data system					
Core Competency Level and Credit (for reference)	Level 3 (16 credits)					
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency			
			Code		Level	Credit
	Core Competency	Maintain and monitor the digital dashboard, report abnormal situations to management, and carry out lean production based on collected data to reduce waste and defects. Monitor the network security of the production data system	111559L3 Apply "Industry 4.0” digital lean principles and use real-time data collected from relevant departments, initially identify wasteful processes or procedures throughout enterprise’s value chain, enable focused operational improvements and lean practices within corresponding departments	3	6	
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3	
			Monitor the data collection at each stage of the production site for plastic products to ensure normal operation, and ensure that the data displayed on the digital dashboard is accurate and reliable	106426L3 Set parameters for traditional injection moulding equipment, assist in traditional injection moulding and defect analysis, to improve product quality	3	4
				111572L3 Operate and maintain intelligent data acquisition equipment and systems for plastic product manufacturing, store, manage, and assist in analysis of digital production data for plastic products	3	3
	Minimum 5 years of functional area relevant experience is recommended					



Functional Area	Product Manufacturing				
Job Position	Engineering / Production Director // Engineering / Production General Manager (Tooling Industry)				
Job Description	Strategise for mould design and refine its manufacturing processes and production techniques to optimise production, thereby enhancing mould functionality and reducing costs. Anticipate the equipment, technologies, and systems required for future business development. Promote digitalisation in design, processes, and production				
Core Competency Level and Credit (for reference)	Level 6 (64 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Strategies for developing mould products, processes, project management, and production techniques; management and optimisation of operations; implementation of automation; and improvement of design and production efficiency	106605L6 Formulate enterprise development strategies, consider cultural conditions of both domestic and international markets and results of competitive analysis, and formulate medium-and long-term development goals and measures for enterprise	6	4
			106601L6 Develop risk management strategies to reduce and avoid risks based on the enterprise's long-term development goals and actual operating conditions	6	4
			106604L6 Establish and maintain quality management system to enhance competitiveness and positive image of enterprise through quality management	6	6
			106582L6 Manage product development knowledge and continuously improve product design quality and efficiency	6	3
			106548L5 Develop project management strategies to ensure projects are implemented with appropriate resources and completed in timely and effective manner	5	4
			106583L6 Research, development, plan, and schedule mould manufacturing processes to ensure all aspects, include cost control, environmental protection, mould functionality, and appearance, meet the standards	6	6
			106586L6 Plan and set up automation systems to improve level of automated manufacturing in enterprises	6	5
			106561L5 Continuously improve factory environment and promote factory quality management, optimise occupational health and safety management, and improve production and operational efficiency	5	5
			111556L6 Establish "Industry 4.0" architecture to interconnect devices within enterprise, achieve single data source, uncover useful data, and assist enterprise in digital transformation and comprehensive operational improvements	6	6
		Establish digital data management system based on "Industry 4.0" in product design, process development, and production; analyse data application			

		areas; integrate data; and improve the efficiency of product design, processes, and production	111557L6 Analyse application areas of "Industry 4.0", helps enterprise to conduct data-driven and intelligent operations in appropriate areas and continuously improve efficiency	6	5
			111552L5 Implement “Industry 4.0” vertical and horizontal integration and connecting various departments and levels within enterprise to achieve data interconnection and interoperability, comprehensive digital transformation can be realised	5	6
			106587L5 Manage process design knowledge, standardise it, and continuously improve the process	5	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Plan product design and development, include concepts, environmental protection, life cycle, and intellectual property protection	106560L5 Conduct eco-friendly product design and lifecycle management to continuously reduce environmental impact of products throughout their entire lifecycle, from manufacturing, usage and end-of-life disposal	5	6
			106574L5 Identify constraints on human, machine, and material resources to develop products	5	3
			106581L5 Protect enterprise intellectual property right through conduct various design registrations, maintain confidentiality, and undergo review	5	3
		Establish product design and development system to enable the parallel development of individual product components and continuously improve product development efficiency	106575L5 Apply and monitor product data management and engineering change network systems, to enable parallel development and design of different product components	5	4
		Develop project management strategies, assess risks, and promote data-driven project management	106580L5 Conduct risk management for product development projects, formulate effective contingency and emergency response measures	5	3
		Conduct overall production management of all workshops in the factory, supervise production and equipment maintenance, and monitor and reduce production risks	106458L5 Implement factory management to improve production efficiency and monitor the timely completion of production plans	5	5
			106460L4 Monitor and supervise operation and maintenance of production equipment, reduce rate of equipment failures, and ensure normal operation of production equipment	4	4
			106562L5 Implement workplace risk management to ensure the safety of employees and customers, and reduce operational and financial risks for business	5	3

Minimum 10 years of functional area relevant experience is recommended

Minimum 5 years of mould production manager or equivalent experience is recommended

Functional Area	Product Manufacturing				
Job Position	Production Manager (Tooling Industry)				
Job Description	1. Carry out production according to the production plan and implement factory management to resolve various production problems 2. Continuously improve factory environment and promote factory quality management in accordance with enterprise's requirements for human resources, security, crisis management, knowledge management, and corporate governance				
Core Competency Level and Credit (for reference)	Level 5 (22 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Conduct overall production management of all workshops in the factory, supervise production and equipment maintenance, and monitor and reduce production risks	106562L5 Implement workplace risk management to ensure the safety of employees and customers, and reduce operational and financial risks for business	5	3
			106458L5 Implement factory management to improve production efficiency and monitor the timely completion of production plans	5	5
			106460L4 Monitor and supervise operation and maintenance of production equipment, reduce rate of equipment failures, and ensure normal operation of production equipment.	4	4
		Continuously collect and analyse production and quality data help maintain production stability and improve efficiency and product quality	106561L5 Continuously improve factory environment and promote factory quality management, optimise occupational health and safety management, and improve production and operational efficiency	5	5
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Conduct production supervision, manage production line equipment and tools to ensure safe and smooth production process, and analyse production data	106384L3 Supervise production to ensure timely completion and achievement of original quality requirements under all predictable and regular conditions	3	3
			106461L4 Conduct occupational safety and health (OSH) risk assessments, assist identify and record potential risks, reduce or eliminate OSH hazards	4	3
			106454L4 Establish and maintain equipment / tool management system, align with enterprise's development needs, and improve production efficiency and stability	4	4
		Arrange and adjust production plans, balance production lines, and schedule secondary processing	106397L3 Arrange production plans and promptly fulfil all original and adjusted production needs	3	3
			106501L4 Balance production line, avoid local bottlenecks, improve overall production efficiency	4	4

			106413L3 Arrange mould heat treatment to meet mould application requirements	3	3
			106414L3 Arrange mould surface treatment, coating, and etching to meet mould application requirements	3	3
		Master common data analysis methods, track various production indicators (include capacity, equipment utilisation, etc.), and make accurate judgments on production data. Analyse data from digital dashboards to enable the implementation of digital production	111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
		Provide timely reports and suggestions to management to improve production efficiency based on the real-time production status of the moulds	106509L3 Perform advanced CNC milling and master various machining parameters to improve quality of mould components	3	4
			106510L3 Perform advanced CNC turning and master various machining parameters to improve quality of mould components	3	4
			106511L3 Perform advanced EDM and master various machining parameters to improve quality of mould components	3	4
			106512L3 Perform wire EDM and master various machining parameters to improve quality of mould components	3	4
			111578L4 Implement digitalisation of mould processing equipment and related configurations, and provide real-time visualisation dashboards for production status in mould processing workshops	4	6
			106406L2 Perform surface grinding and master various processing data to improve the quality of mould components	2	3

Minimum 7 years of functional area relevant experience is recommended

Minimum 2 years of mould production supervisor or equivalent experience is recommended

Functional Area	Product Manufacturing				
Job Position	Production Supervisor (Tooling Industry)				
Job Description	1. Carry out plant management, supervise production progress, and monitor the status of production equipment 2. Balance production and make adjustments, reasonably arrange equipment and surrounding facilities				
Core Competency Level and Credit (for reference)	Level 4 (28 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Conduct production supervision, manage production line equipment and tools to ensure a safe and smooth production process, and perform production data analysis	106384L3 Supervise production to ensure timely completion and achievement of original quality requirements under all predictable and regular conditions	3	3
			106461L4 Conduct occupational safety and health (OSH) risk assessments, assist identify and record potential risks, reduce or eliminate OSH hazards	4	3
			106454L4 Establish and maintain equipment / tool management system, align with enterprise's development needs, and improve production efficiency and stability	4	4
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Schedule and adjust production plans, perform production line balancing, and arrange secondary processing	106397L3 Arrange production plans and promptly fulfill all original and adjusted production needs	3	3
			106501L4 Balance production line, avoid local bottlenecks, improve overall production efficiency	4	4
			106413L3 Arrange mould heat treatment to meet mould application requirements	3	3
			106414L3 Arrange mould surface treatment, coating, and etching to meet mould application requirements	3	3
	Additional Competency	Perform mould processing and collect production data in real time	106589L4 Conduct advanced CNC multi-axis precision milling, master various machining parameters, and improve quality of mould components	4	6
			106590L4 Conduct advanced CNC turning precision and ultra-precision machining, master various machining parameters, to improve quality of mould components	4	4
			106591L4 Conduct advanced EDM machining, master various machining data, to enhance quality of mould components and parts	4	3

			106513L3 Perform profile grinding operations and master machining data to improve quality and management of mould components	3	4
			106515L4 Assemble and adjust moulds to meet operational requirements, ensure smooth production	4	4
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
Minimum 6 years of functional area relevant experience is recommended					
Minimum 2 years of mould senior technician or equivalent experience is recommended					

Functional Area	Product Manufacturing				
Job Position	Senior Technician (Tooling Industry)				
Job Description	Carry out plant management, supervise production progress and operation of production equipment Balance production and make adjustments, reasonably arrange equipment and surrounding facilities				
Core Competency Level and Credit (for reference)	Level 4 (24 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Perform mould processing and collect production data in real time	106589L4 Conduct advanced CNC multi-axis precision milling, master various machining parameters, and improve quality of mould components	4	6
			106590L4 Conduct advanced CNC turning precision and ultra-precision machining, master various machining parameters, to improve quality of mould components	4	4
			106591L4 Conduct advanced EDM machining, master various machining data, to enhance quality of mould components and parts	4	3
			106513L3 Perform profile grinding operations and master machining data to improve quality and management of mould components	3	4
			106515L4 Assemble and adjust moulds to meet operational requirements, ensure smooth production	4	4
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
	Additional Competency	Perform mould milling processing and collect production data in real time	106509L3 Perform advanced CNC milling and master various machining parameters to improve quality of mould components	3	4
		Perform mould turning processing and collect production data in real time	106510L3 Perform advanced CNC turning and master various machining parameters to improve quality of mould components	3	4
		Perform mould EDM (electrical discharge machining) processing and collect production data in real time	106511L3 Perform advanced EDM and master various machining parameters to improve quality of mould components	3	4
			106512L3 Perform wire EDM and master various machining parameters to improve quality of mould components	3	4
		Perform mould grinding processing and collect production data in real time	106514L3 Perform coordinate grinding and coordinate boring, and master various machining parameters to improve quality of mould components	3	4

			106407L3 Perform basic computer numerical control (CNC) turning machining and master various machining data to improve quality of mould components	3	4
	Perform mould polishing processing and collect production data in real time		106410L2 Perform benchwork to improve the quality of mould components	2	4
			106411L3 Perform mould polishing, and monitor various processing data to improve quality of mould components	3	4
Minimum 6 years of functional area relevant experience is recommended					
Minimum 2 years of mould technician or equivalent experience is recommended					

Functional Area	Product Manufacturing				
Job Position	Technician / Programmer (Milling) (Tooling Industry)				
Job Description	Perform advanced CNC milling processing and carry out basic equipment maintenance				
Core Competency Level and Credit (for reference)	Level 3 (7 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code		Level
	Core Competency	Perform mould milling processing and collect production data in real time	106509L3 Perform advanced CNC milling and master various machining parameters to improve quality of mould components	3	4
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
	Additional Competency	Perform mould milling processing and comply with occupational safety and health operations as well as carry out environmentally friendly production	106402L3 Perform basic computer numerical control (CNC) milling machining and master various machining data to improve quality of mould components	3	3
			106408L2 Perform manual mechanical milling to obtain and analyse various machining data to improve quality of mould components	2	4
			106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2	3
	Minimum 5 years of functional area relevant experience is recommended				
Minimum 2 years of mould junior technician (milling) or equivalent experience is recommended					

Functional Area	Product Manufacturing						
Job Position	Junior Technician (Milling) (Tooling Industry)						
Job Description	Perform basic milling processing (include CNC and manual) and carry out simple equipment maintenance						
Core Competency Level and Credit (for reference)	Level 2 (11 credits)						
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency				
			Code			Level	Credit
	Core Competency	Perform mould milling processing and comply with occupational safety and health operations as well as carry out environmentally friendly production	106402L3 Perform basic computer numerical control (CNC) milling machining and master various machining data to improve quality of mould components			3	3
			106408L2 Perform manual mechanical milling to obtain and analyse various machining data to improve quality of mould components			2	4
			106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations			2	3
	Minimum 3 years of functional area relevant experience is recommended						

Functional Area	Product Manufacturing						
Job Position	Technician (Turning) (Tooling Industry)						
Job Description	Perform advanced CNC lathe processing and carry out simple equipment maintenance						
Core Competency Level and Credit (for reference)	Level 3 (7 credits)						
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency				
			Code			Level	Credit
	Core Competency	Perform mould turning processing and collect production data in real time	106510L3 Perform advanced CNC turning and master various machining parameters to improve quality of mould components			3	4
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations			3	3
	Additional Competency	Perform mould turning processing and comply with occupational safety and health operations as well as carry out environmentally friendly production	106403L3 Perform basic computer numerical control (CNC) turning machining and master various machining data to improve quality of mould components			3	3
			106409L2 Perform manual mechanical turning to obtain and control various machining data to improve the quality of mould components			2	4
			106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations			2	3
	Minimum 5 years of functional area relevant experience is recommended						
	Minimum 2 years of mould junior technician (turning) or equivalent experience is recommended						

Functional Area	Product Manufacturing						
Job Position	Junior Technician (Turning) (Tooling Industry)						
Job Description	Perform basic turning processing (include CNC and manual) and carry out simple equipment maintenance						
Core Competency Level and Credit (for reference)	Level 2 (11 credits)						
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency				
			Code			Level	Credit
	Core Competency	Perform mould turning processing and comply with occupational safety and health operations as well as carry out environmentally friendly production	106403L3 Perform basic computer numerical control (CNC) turning machining and master various machining data to improve quality of mould components			3	3
			106409L2 Perform manual mechanical turning to obtain and control various machining data to improve the quality of mould components			2	4
			106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations			2	3
	Minimum 3 years of functional area relevant experience is recommended						

Functional Area	Product Manufacturing				
Job Position	Technician (Electrical Discharge Machining) (Tooling Industry)				
Job Description	Familiarise with various advanced EDM and wire cutting processing techniques, and handle general workshop operations as well as simple equipment maintenance				
Core Competency Level and Credit (for reference)	Level 3 (11 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code		Level
	Core Competency	Perform mould EDM (electrical discharge machining) processing and collect production data in real time	106511L3 Perform advanced EDM and master various machining parameters to improve quality of mould components	3	4
			106512L3 Perform wire EDM (Electrical Discharge Machining) and master various machining parameters to improve the quality of mould components (applicable to operators of the above machine tools).	3	4
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
	Additional Competency	Perform mould EDM processing and comply with occupational safety and health operations as well as carry out environmentally friendly production	106405L2 Perform electrical discharge machining (EDM) and monitor various machining data to improve quality of mould components	2	3
			106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2	3
Minimum 5 years of functional area relevant experience is recommended					
Minimum 2 years of mould junior technician (electrical discharge machining) or equivalent experience is recommended					

Functional Area	Product Manufacturing				
Job Position	Junior Technician (Electrical Discharge Machining) (Tooling Industry)				
Job Description	Perform EDM processing and carry out simple equipment maintenance				
Core Competency Level and Credit (for reference)	Level 2 (6 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Perform mould EDM processing and comply with occupational safety and health operations as well as carry out environmentally friendly production	106405L2 Perform electrical discharge machining (EDM) and monitor various machining data to improve quality of mould components	2	3
			106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2	3
	Minimum 3 years of functional area relevant experience is recommended				

Functional Area	Product Manufacturing					
Job Position	Technician (Grinding) (Tooling Industry)					
Job Description	Perform jig grinding, coordinate boring, internal and external cylindrical grinding, centreless grinding, and counterbore grinding operations, and carry out simple equipment maintenance					
Core Competency Level and Credit (for reference)	Level 3 (11 credits)					
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency			
			Code		Level	Credit
	Core Competency	Perform mould grinding processing and collect production data in real time	106514L3 Perform coordinate grinding and coordinate boring, and master various machining parameters to improve quality of mould components		3	4
			106407L3 Perform basic computer numerical control (CNC) turning machining and master various machining data to improve quality of mould components		3	4
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations		3	3
	Additional Competency	Perform mould grinding processing and comply with occupational safety and health operations as well as carry out environmentally friendly production	106406L2 Perform surface grinding and master various processing data to improve the quality of mould components		2	3
			106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations		2	3
	Minimum 5 years of functional area relevant experience is recommended					
Minimum 2 years of mould junior technician (grinding) or equivalent experience is recommended						

Functional Area	Product Manufacturing				
Job Position	Junior Technician (Grinding) (Tooling Industry)				
Job Description	Perform surface grinding processing and carry out simple equipment maintenance				
Core Competency Level and Credit (for reference)	Level 2 (6 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code		Level
	Core Competency	Perform mould grinding processing and comply with occupational safety and health operations as well as carry out environmentally friendly production	106406L2 Perform surface grinding and master various processing data to improve the quality of mould components	2	3
			106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2	3
	Minimum 3 years of functional area relevant experience is recommended				

Functional Area	Product Manufacturing				
Job Position	Technician (Grinding and Assembly) (Tooling Industry)				
Job Description	Perform benchwork, mould polishing, and carry out simple equipment maintenance				
Core Competency Level and Credit (for reference)	Level 3 (11 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Perform mould polishing processing and collect production data in real time	106410L2 Perform benchwork to improve the quality of mould components	2	4
			106411L3 Perform mould polishing, and monitor various processing data to improve quality of mould components	3	4
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
	Additional Competency	Perform mould grinding processing and comply with occupational safety and health operations as well as carry out environmentally friendly production	106412L3 Perform mould maintenance and upkeep to ensure the mould is suitable for production	3	3
			106404L2 Perform drilling and tapping to obtain various processing data to improve quality of mould components	2	3
			106368L1 Understand methods of usage of various common basic hand tools and use them correctly to assist in production	1	3
			106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2	3
	Minimum 5 years of functional area relevant experience is recommended				
	Minimum 2 years of mould junior technician (grinding and assembly) or equivalent experience is recommended				

Functional Area	Product Manufacturing				
Job Position	Junior Technician (Grinding and Assembly) (Tooling Industry)				
Job Description	Perform mould maintenance and servicing, and carry out simple equipment maintenance				
Core Competency Level and Credit (for reference)	Level 2 (12 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code		Level
	Core Competency	Perform mould grinding processing and comply with occupational safety and health operations as well as carry out environmentally friendly production	106412L3 Perform mould maintenance and upkeep to ensure the mould is suitable for production	3	3
			106404L2 Perform drilling and tapping to obtain various processing data to improve quality of mould components	2	3
			106368L1 Understand methods of usage of various common basic hand tools and use them correctly to assist in production	1	3
			106385L2 Apply occupational safety, health, and environmental protection laws and measures to ensure compliant, safe, and environmentally friendly production and operations	2	3
	Minimum 3 years of functional area relevant experience is recommended				

Functional Area	Product Manufacturing				
Job Position	Production Data Assistant Analyst / Engineer (Tooling Industry)				
Job Description	Analyse various production data of mould processing, propose suggestions for improving production efficiency, monitor the implementation of accepted suggestions, and continuously improve production based on real-time data				
Core Competency Level and Credit (for reference)	Level 4 (41 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Master commonly used data analysis methods, follow up on various production indicators (include capacity, equipment utilisation, etc.), make accurate judgments on production data, and analyse data from the digital dashboard to ensure the implementation of digital production	111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Respond to the real-time situation of mould production, report to management in a timely manner and provide recommendations to enhance production efficiency	106509L3 Perform advanced CNC milling and master various machining parameters to improve quality of mould components	3	4
			106510L3 Perform advanced CNC turning and master various machining parameters to improve quality of mould components	3	4
			106511L3 Perform advanced EDM and master various machining parameters to improve quality of mould components	3	4
			106512L3 Perform wire EDM and master various machining parameters to improve quality of mould components	3	4
			111578L4 Implement digitalisation of mould processing equipment and related configurations, and provide real-time visualisation dashboards for production status in mould processing workshops	4	6
			106406L2 Perform surface grinding and master various processing data to improve the quality of mould components	2	3

	Additional Competency	Maintain and monitor the digital dashboard, report abnormal situations to management, and carry out lean production based on collected data to reduce waste and defects. Monitor the network security of the production data system	111559L3 Apply "Industry 4.0" digital lean principles and use real-time data collected from relevant departments, initially identify wasteful processes or procedures throughout enterprise's value chain, enable focused operational improvements and lean practices within corresponding departments	3	6
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
		Monitor the data collection at each stage of the mould production site to ensure normal operation, and ensure that the data displayed on the digital dashboard is accurate and reliable	106402L3 Perform basic computer numerical control (CNC) milling machining and master various machining data to improve quality of mould components	3	3
			106403L3 Perform basic computer numerical control (CNC) turning machining and master various machining data to improve quality of mould components	3	3
			106405L2 Perform electrical discharge machining (EDM) and monitor various machining data to improve quality of mould components	2	3
			111573L3 Operate and maintain mould production data acquisition equipment and systems, store, manage, and assist analysis of digital mould production data	3	4
		Minimum 6 years of functional area relevant experience is recommended Minimum 2 years of mould production digital data administrator or equivalent experience is recommended			

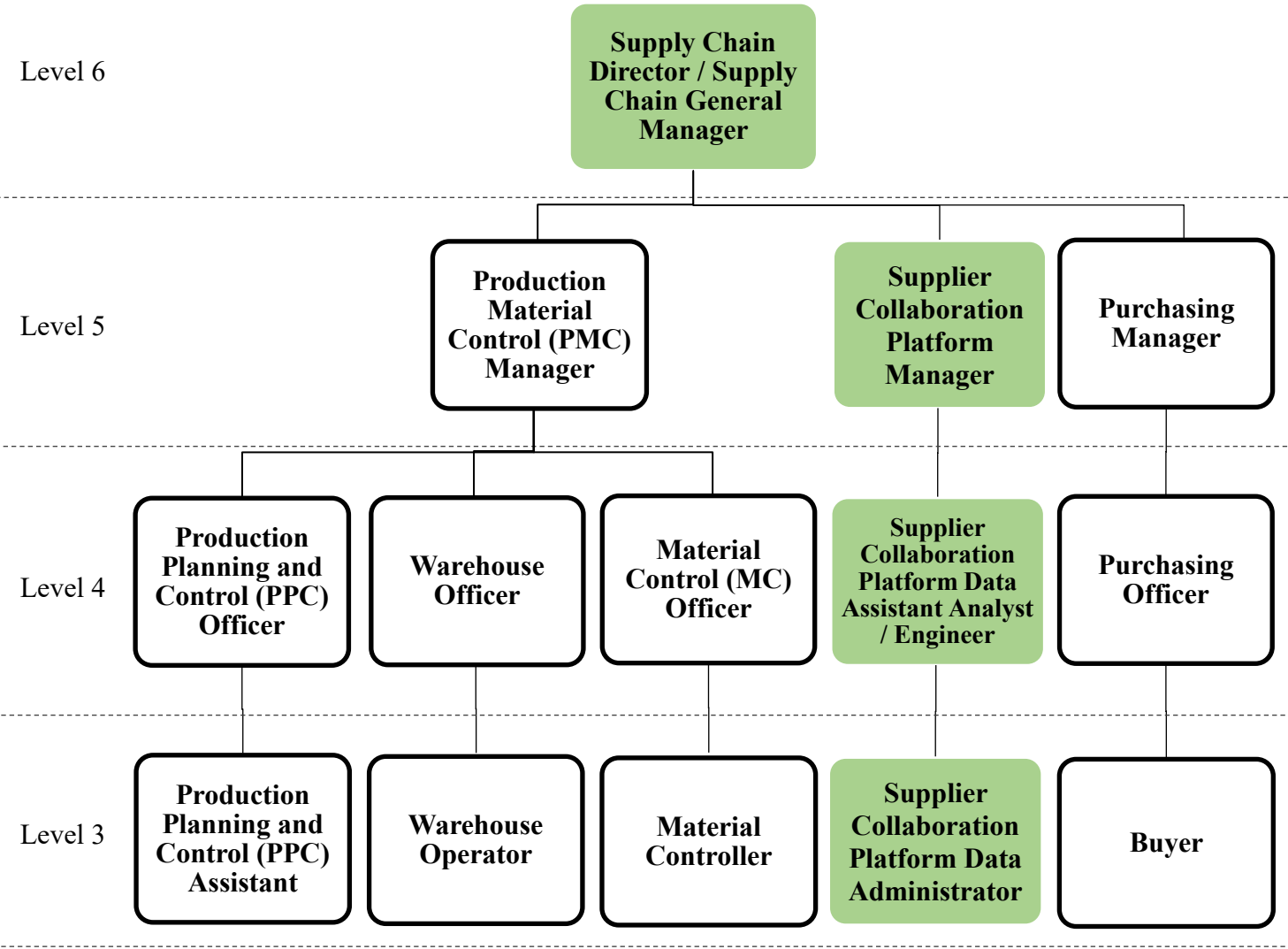
Functional Area	Product Manufacturing				
Job Position	Production Digital Data Administrator (Tooling Industry)				
Job Description	Collect real-time production data from various mould processing operations, carry out lean production, monitor the accuracy of the data, and ensure the network security of the production data system				
Core Competency Level and Credit (for reference)	Level 3 (25 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Maintain and monitor the digital dashboard, report abnormal situations to management, and carry out lean production based on collected data to reduce waste and defects. Monitor the network security of the production data system	111559L3 Apply "Industry 4.0” digital lean principles and use real-time data collected from relevant departments, initially identify wasteful processes or procedures throughout enterprise’s value chain, enable focused operational improvements and lean practices within corresponding departments	3	6
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
		Monitor the data collection at each stage of the mould production site to ensure normal operation, and ensure that the data displayed on the digital dashboard is accurate and reliable	106402L3 Perform basic computer numerical control (CNC) milling machining and master various machining data to improve quality of mould components	3	3
			106403L3 Perform basic computer numerical control (CNC) turning machining and master various machining data to improve quality of mould components	3	3
			106405L2 Perform electrical discharge machining (EDM) and monitor various machining data to improve quality of mould components	2	3
			106406L2 Perform surface grinding and master various processing data to improve the quality of mould components	2	3
			111573L3 Operate and maintain mould production data acquisition equipment and systems, store, manage, and assist analysis of digital mould production data	3	4
			Minimum 5 years of functional area relevant experience is recommended		

Branches **Tooling, Metals and Plastics Industry**

Functional area **Supply Chain Management**

Role

QF
Level



Functional Area	Supply Chain Management				
Job Position	Supply Chain Director / Supply Chain General Manager (Tooling, Metals and Plastics Industry)				
Job Description	Plan corporate procurement, production, materials control, warehousing, and shipping strategies; manage and coordinate collaborating enterprises in the supply chain; optimise the supply chain, reduce costs, and ensure smooth supply. Promote the digitalisation and intelligentisation of supply chain operation simultaneously				
Core Competency Level and Credit (for reference)	Level 6 (43 credits)				
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency		
			Code	Level	Credit
		Develop strategies and application areas for “Industry 4.0” in supply chain development, integrate internal and external supply chain links, and implement “Industry 4.0”	111558L6 Formulate company's "Industry 4.0" development strategy, plan and improve the implementation of innovative digital business models	6	6
			111557L6 Analyse application areas of “Industry 4.0”, helps enterprise to conduct data-driven and intelligent operations in appropriate areas and continuously improve efficiency	6	5
			111552L5 Implement “Industry 4.0” vertical and horizontal integration and connecting various departments and levels within enterprise to achieve data interconnection and interoperability, comprehensive digital transformation can be realised	5	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Develop procurement, supply chain management, risk management policies and strategies according to enterprise’s needs	106607L7 Establish and maintain corporate management systems, comprehensively grasp the industrial development trends as well as future needs for enterprise development in achieving long-term business success and enhancement	7	4
			106601L6 Develop risk management strategies to reduce and avoid risks based on the enterprise's long-term development goals and actual operating conditions	6	4
			106588L5 Develop procurement strategies, to align with enterprise's needs, plans, and development	5	3
		Formulate a series of production and logistics strategies based on enterprise’s development needs and direction	106605L6 Formulate enterprise development strategies, consider cultural conditions of both domestic and international markets and results of competitive analysis, and formulate medium-and long-term development goals and measures for enterprise	6	4
			106505L5 Formulate material requirements planning (MRP) plan based on delivery dates required by each material supplier to ensure timely delivery of materials and semi-finished products for production	5	3

			106538L5 Schedule and set up product shipping solutions and plans to ensure smooth, timely, and cost-effective delivery	5	3
	Additional Competency	Arrange and coordinate production and shipping plans, track and maintain materials, semi-finished products, and finished products	106507L5 Establish and maintain electronic inventory identification and management system, to ensure appropriate inventory levels	5	6
			106397L3 Arrange production plans and promptly fulfill all original and adjusted production needs	3	3
		Formulate material requirements planning and conduct data analysis for implementation	106539L4 Manage and continuously improve enterprise logistics fleet, ensure smooth and timely medium-to-short haul deliveries, and achieve cost-effectiveness (applicable to metal and plastics industries)	4	3
	Minimum 10 years of functional area relevant experience is recommended Minimum 5 years of production material control (PMC) manager, supplier collaboration platform manager, purchasing manager or equivalent experience is recommended				

Functional Area	Supply Chain Management				
Job position	Production Material Control (PMC) Manager (Mould, Metal and Plastics Industries)				
Job Description	Based on enterprise's overall business needs and development direction, formulate a series of product delivery strategies and plans				
Core Competency Level and Credit (for reference)	Level 5 (23 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Arrange and coordinate production and shipping plans, track and maintain materials, semi-finished products, and finished products	106538L5 Schedule and set up product shipping solutions and plans to ensure smooth, timely, and cost-effective delivery	5	3
			106507L5 Establish and maintain electronic inventory identification and management system, to ensure appropriate inventory levels	5	6
			106397L3 Arrange production plans and promptly fulfill all original and adjusted production needs	3	3
		Formulate material requirements planning and conduct data analysis for implementation	106505L5 Formulate material requirements planning (MRP) plan based on delivery dates required by each material supplier to ensure timely delivery of materials and semi-finished products for production	5	3
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
			106539L4 Manage and continuously improve enterprise logistics fleet, ensure smooth and timely medium-to-short haul deliveries, and achieve cost-effectiveness (applicable to metal and plastics industries)	4	3
	Additional Competency	Establish and maintain warehouses, review security measures, implement warehouse automation and intelligence	106506L4 Establish and maintain warehouses, ensure inventory requirements are met and quantities are appropriate, enable smooth, continuous production and warehouse operations	4	3
			106508L4 Design and implement warehouse automation and intelligent systems, improve inventory efficiency, accuracy and traceability	4	3
			106400L3 Review and manage inventory environment and security to prevent theft of materials, semi-finished products, and finished products, ensure inventory environment meets specific requirements for storing various types of goods	3	3
			106374L2 Arrange movement of goods to ensure safe and smooth logistics and complete the task within specified time	2	3

	Minimum 7 years of functional area relevant experience is recommended Minimum 2 years of material control (MC) officer, warehouse officer, production planning and control (PPC) officer or equivalent experience is recommended
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Functional Area	Supply Chain Management				
Job Position	Production Planning and Control (PPC) Officer (Tooling, Metals and Plastics Industry)				
Job Description	Prepare suitable production schedules according to production order requirements				
Core Competency Level and Credit (for reference)	Level 4 (8 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Schedule production and adjust production arrangements according to real-time situations	106397L3 Arrange production plans and promptly fulfill all original and adjusted production needs	3	3
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Handle production orders and follow up on inventory in real time	106373L2 Organise production orders and inventory confirmations to ensure effective order tracking and completion, verify material, semi-finished product, finished product inventories meet order requirements	2	3
			106449L3 Conduct electronic message exchange for cargo to ensure consistency of logistics information with logistics service providers and customers (applicable to plastics and metal industries)	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
	Minimum 6 years of functional area relevant experience is recommended				
Minimum 2 years of Production Planning and Control (PPC) assistant or equivalent experience is recommended					

Functional Area	Supply Chain Management					
Job Position	Production Planning and Control (PPC) Assistant (Tooling, Metals and Plastics Industry)					
Job Description	Organise production orders and inventory confirmation, assist in the preparation of production schedules					
Core Competency Level and Credit (for reference)	Level 3 (9 credits)					
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency			
			Code		Level	Credit
			106373L2 Organise production orders and inventory confirmations to ensure effective order tracking and completion, verify material, semi-finished product, finished product inventories meet order requirements		2	3
			106449L3 Conduct electronic message exchange for cargo to ensure consistency of logistics information with logistics service providers and customers (applicable to plastics and metal industries)		3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations		3	3
Minimum 5 years of functional area relevant experience is recommended						

Functional Area	Supply Chain Management				
Job Position	Warehouse Officer (Tooling, Metals and Plastics Industry)				
Job Description	Manage and maintain various warehouses within the enterprise, and review inventory safety				
Core Competency Level and Credit (for reference)	Level 4 (17 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code		Level
	Core Competency	Establish and maintain warehouses, review security, and implement warehouse automation and intelligence	106506L4 Establish and maintain warehouses, ensure inventory requirements are met and quantities are appropriate, enable smooth, continuous production and warehouse operations	4	3
			106508L4 Design and implement warehouse automation and intelligent systems, improve inventory efficiency, accuracy and traceability	4	3
			106400L3 Review and manage inventory environment and security to prevent theft of materials, semi-finished products, and finished products, ensure inventory environment meets specific requirements for storing various types of goods	3	3
			106374L2 Arrange movement of goods to ensure safe and smooth logistics and complete the task within specified time	2	3
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competence	Conduct cargo handling	106401L3 Operate manual and power-operated transport and lifting equipment within the plant to safely assist in handling of heavy goods and equipment	3	3
			106367L1 Manual handling, assisting logistics under safe operating conditions	1	3
			Minimum 6 years of functional area relevant experience is recommended Minimum 2 years of warehouse operator or equivalent experience is recommended		

Functional Area	Supply Chain Management				
Job Position	Warehouse Operator (Tooling, Metals and Plastics Industry)				
Job Description	Carry out daily material control, shipment work, and coordination as instructed by management				
Core Competency Level and Credit (for reference)	Level 3 (9 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Conduct cargo handling	106401L3 Operate manual and power-operated transport and lifting equipment within the plant to safely assist in handling of heavy goods and equipment	3	3
			106367L1 Manual handling, assisting logistics under safe operating conditions	1	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
	Minimum 5 years of functional area relevant experience is recommended				

Functional Area	Supply Chain Management				
Job Position	Material Control (MC) Officer (Tooling, Metals and Plastics Industry)				
Job Description	Integrate inventory and production plans of finished products, semi-finished products, and components within the enterprise, and manage various aspects of material control and shipment				
Core Competency Level and Credit (for reference)	Level 4 (11 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Perform material control and shipment management	106505L5 Formulate material requirements planning (MRP) plan based on delivery dates required by each material supplier to ensure timely delivery of materials and semi-finished products for production	5	3
			106539L4 Manage and continuously improve enterprise logistics fleet, ensure smooth and timely medium-to-short haul deliveries, and achieve cost-effectiveness (applicable to metal and plastics industries)	4	3
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Conduct daily material control and monitor cargo information exchange	106399L3 Perform material control and production progress tracking based on material requirements planning (MRP)	3	3
			106449L3 Conduct electronic message exchange for cargo to ensure consistency of logistics information with logistics service providers and customers (applicable to plastics and metal industries)	3	3
		Arrange cargo shipment and handle shipment documentation	106448L3 Handle shipping arrangements to ensure cost-effective and timely delivery and track shipping status	3	3
			106450L3 Arrange customs declaration and clearance to ensure smooth and compliant cargo shipment	3	3
			106381L2 Process logistics and freight documents, ensure their accuracy and compliance with relevant laws and regulations of the destination country to guarantee smooth customs clearance	2	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3

	Minimum 6 years of functional area relevant experience is recommended Minimum 2 years of material controller or equivalent experience is recommended
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Functional Area	Supply Chain Management				
Job Position	Material Controller (Tooling, Metals and Plastics Industry)				
Job Description	Carry out daily material control, shipment work, and coordination as instructed by management				
Core Competency Level and Credit (for reference)	Level 3 (18 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Conduct daily material control and monitor cargo information exchange	106399L3 Perform material control and production progress tracking based on material requirements planning (MRP)	3	3
			106449L3 Conduct electronic message exchange for cargo to ensure consistency of logistics information with logistics service providers and customers (applicable to plastics and metal industries)	3	3
		Arrange cargo shipment and handle shipment documentation	106448L3 Handle shipping arrangements to ensure cost-effective and timely delivery and track shipping status	3	3
			106450L3 Arrange customs declaration and clearance to ensure smooth and compliant cargo shipment	3	3
			106381L2 Process logistics and freight documents, ensure their accuracy and compliance with relevant laws and regulations of the destination country to guarantee smooth customs clearance	2	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
			Minimum 5 years of functional area relevant experience is recommended		

Functional Area	Supply Chain Management				
Job position	Supplier Collaboration Platform Manager (Tooling, Metals and Plastics Industry)				
Job Description	Establish supplier collaboration platform to analyse data provided by procurement, materials control, warehousing departments and supply chain partners, and implement measures to improve supply chain and procurement operations				
Core Competency Level and Credit (for reference)	Level 5 (35 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Based on enterprise's development needs and direction, formulate procurement, supply chain management, and material control strategies and guidelines. Manage the system security of all machinery, instruments, and systems for collecting data, establish data network security, develop material requirements and delivery plans	106588L5 Develop procurement strategies, to align with enterprise's needs, plans, and development	5	3
			106504L5 Formulate procurement guidelines, to standardise the procurement practices and improve procurement efficiency	5	4
			106538L5 Schedule and set up product shipping solutions and plans to ensure smooth, timely, and cost-effective delivery	5	3
			106505L5 Formulate material requirements planning (MRP) plan based on delivery dates required by each material supplier to ensure timely delivery of materials and semi-finished products for production	5	3
		Establish supplier collaboration platform to formulate a series of production and material control strategies based on the company's development needs and direction. Make appropriate decisions and adjust production plans according to real-time order and inventory status. Use digital methods to combine supplier performance (include delivery cycle, quantity, quality, etc.) with other information to assist enterprise to formulate procurement strategies	111557L6 Analyse application areas of "Industry 4.0", helps enterprise to conduct data-driven and intelligent operations in appropriate areas and continuously improve efficiency	6	5
			111554L5 Establish "Industry 4.0" enterprise database to provide comprehensive, multi-faceted, and real-time operational data for recording and analysis purposes	5	6
			111555L5 Implement "Industry 4.0" digital operations and performance management, establish digital dashboards as needed, develop enterprise digital key performance indicators	5	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Maintain and monitor supplier collaboration platform to ensure production plans are implemented; provide timely reports and suggestions to management based on real-time order and inventory status, and adjust production plans accordingly; use digital methods to combine supplier performance (include	111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5

		delivery cycle, quantity, quality, etc.) with other information to assist enterprise to formulate procurement strategies			
Minimum 7 years of functional area relevant experience is recommended Minimum 2 years of supplier collaboration platform data assistant analyst / engineer or equivalent experience is recommended					

Functional Area	Supply Chain Management				
Job Position	Supplier Collaboration Platform Data Assistant Analyst / Engineer (Tooling, Metals and Plastics Industry)				
Job Description	Analyse data from procurement, material control, warehouse departments, and supply chain partners, provide recommendations to improve supply chain and procurement operations				
Core Competency Level and Credit (for reference)	Level 4 (28 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Manage the various machines, instruments, and system security involved in data collection during the production process, and ensure data network security, formulate material requirements and shipment plans	106538L5 Schedule and set up product shipping solutions and plans to ensure smooth, timely, and cost-effective delivery	5	3
			106505L5 Formulate material requirements planning (MRP) plan based on delivery dates required by each material supplier to ensure timely delivery of materials and semi-finished products for production	5	3
		Maintain and monitor the supplier collaboration platform to ensure the implementation of production plans, make timely reports and recommendations to management based on real-time order and inventory situations to adjust production schedules; combine suppliers' performance (include lead time, delivery quantity, quality, etc.) in a digitalised manner with other information to assist the company in formulating procurement strategies	111554L5 Establish "Industry 4.0" enterprise database to provide comprehensive, multi-faceted, and real-time operational data for recording and analysis purposes	5	6
			111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Monitor material control, production planning, inventory, and shipment	106399L3 Perform material control and production progress tracking based on material requirements planning (MRP)	3	3
			106448L3 Handle shipping arrangements to ensure cost-effective and timely delivery and track shipping status	3	3
			106400L3 Review and manage inventory environment and security to prevent theft of materials, semi-finished products, and finished products, ensure inventory environment meets specific requirements for storing various types of goods	3	3
			106397L3 Arrange production plans and promptly fulfill all original and adjusted production needs	3	3

		Monitor the supplier collaboration platform, collect and inspect platform data to ensure the completeness of data provided by suppliers, and ensure data network security	111559L3 Apply "Industry 4.0" digital lean principles and use real-time data collected from relevant departments, initially identify wasteful processes or procedures throughout enterprise's value chain, enable focused operational improvements and lean practices within corresponding departments	3	6
			111547L3 Implement cybersecurity for Industry 4.0, promote network and information security control measures that simultaneously enable information exchange and ensure information system security in Industry 4.0	3	6
Minimum 6 years of functional area relevant experience is recommended					
Minimum 2 years of supplier collaboration platform data administrator or equivalent experience is recommended					

Functional Area	Supply Chain Management				
Job Position	Supplier Collaboration Platform Data Administrator (Tooling, Metals and Plastics Industry)				
Job Description	Collect production planning, material control, inventory, and shipment data, monitor for any abnormalities in the data, and ensure the network security of supply chain data				
Core Competency Level and Credit (for reference)	Level 3 (24 credits)				
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency		
			Code	Level	Credit
		Monitor material control, production planning, inventory, and shipment	106399L3 Perform material control and production progress tracking based on material requirements planning (MRP)	3	3
			106448L3 Handle shipping arrangements to ensure cost-effective and timely delivery and track shipping status	3	3
			106400L3 Review and manage inventory environment and security to prevent theft of materials, semi-finished products, and finished products, ensure inventory environment meets specific requirements for storing various types of goods	3	3
			106397L3 Arrange production plans and promptly fulfill all original and adjusted production needs	3	3
		Monitor the supplier collaboration platform, collect and inspect platform data to ensure the completeness of data provided by suppliers, and ensure data network security	111559L3 Apply "Industry 4.0" digital lean principles and use real-time data collected from relevant departments, initially identify wasteful processes or procedures throughout enterprise's value chain, enable focused operational improvements and lean practices within corresponding departments	3	6
			111547L3 Implement cybersecurity for Industry 4.0, promote network and information security control measures that simultaneously enable information exchange and ensure information system security in Industry 4.0	3	6
		Minimum 5 years of functional area relevant experience is recommended			

Functional Area	Supply Chain Management				
Job position	Purchasing Manager (Tooling, Metals and Plastics Industry)				
Job Description	Based on overall business needs and development direction of enterprise, formulate series of procurement strategies and systems				
Core Competency Level and Credit (for reference)	Level 5 (12 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Develop procurement strategies and guidelines, monitor and analyse supplier performance in terms of price, quality, and service, formulate medium- and long-term supply chain strategies	106588L5 Develop procurement strategies, to align with enterprise's needs, plans, and development	5	3
			106504L5 Formulate procurement guidelines, to standardise the procurement practices and improve procurement efficiency	5	4
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Find and select suitable suppliers, evaluate their real time performance and establish cooperative relationship	106502L4 Provide cost-effective, high-quality materials and semi-finished products for enterprise, establish reliable and trustworthy suppliers	4	3
			106503L4 Establish relationships with suppliers to optimise partnership, promote long-term cooperation, ensure stable and efficient supply, and share risks collaboratively	4	3
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Examine supplier capabilities and past performance in terms of technology, production capacity, quality, and environmental protection	106439L3 Apply basic metal material knowledge, to select material in suitable types and specifications for metal products to achieve required functionality (applicable to metal industry)	3	3
			106440L3 Apply basic plastic material knowledge, to select material in suitable types and specifications for plastic products to achieve required functionality (applicable to plastics industry)	3	3
			106441L3 Apply basic tool steel knowledge, to select material in suitable types and specifications for moulds to achieve required functionality (applicable to tooling industry)	3	3
			106383L4 Apply relevant environmental standards and regulations for products to assess capability of enterprises / suppliers in meeting environmental requirements	4	3

	Minimum 7 years of functional area relevant experience is recommended Minimum 2 years of purchasing officer or equivalent experience is recommended
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Functional Area	Supply Chain Management				
Job Position	Purchasing Officer (Tooling, Metals and Plastics Industry)				
Job Description	Identify and screen suppliers of various types of production equipment, measuring equipment, and production materials according to procurement strategies and guidelines, and establish relationships with suppliers				
Core Competency Level and Credit (for reference)	Level 4 (23 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code		Level
	Core Competency	Search for and screen suitable suppliers, monitor supplier performance in real time, and build cooperative relationships	106502L4 Provide cost-effective, high-quality materials and semi-finished products for enterprise, establish reliable and trustworthy suppliers	4	3
			106503L4 Establish relationships with suppliers to optimise partnership, promote long-term cooperation, ensure stable and efficient supply, and share risks collaboratively	4	3
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Evaluate suppliers' capabilities and past performance in terms of technology, production capacity, quality, and environmental protection	106439L3 Apply basic metal material knowledge, to select material in suitable types and specifications for metal products to achieve required functionality	3	3
			106440L3 Apply basic plastic material knowledge, to select material in suitable types and specifications for plastic products to achieve required functionality	3	3
			106441L3 Apply basic tool steel knowledge, to select material in suitable types and specifications for moulds to achieve required functionality	3	3
			106383L4 Apply relevant environmental standards and regulations for products to assess capability of enterprises / suppliers in meeting environmental requirements	4	3
	Additional Competency	Procure according to requirements for technology, production capacity, environmental protection, and quality	106398L3 Conduct and monitor procurement to ensure timely acquisition of cost-effective and high-quality materials, semi-finished products, and services to meet production and operational needs, and monitor supplier performance	3	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3

Minimum 6 years of functional area relevant experience is recommended
Minimum 2 years of buyer or equivalent experience is recommended

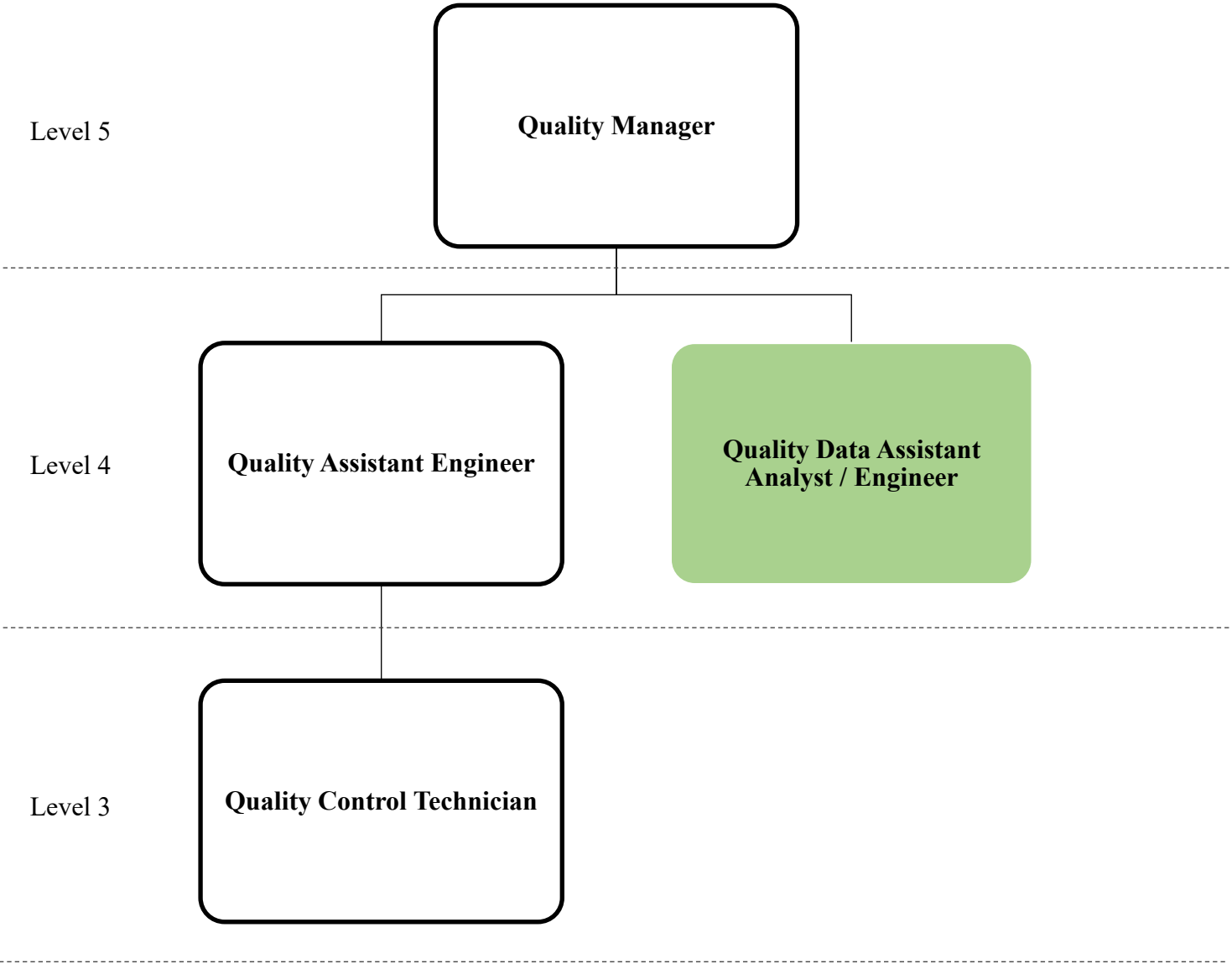
Functional Area	Supply Chain Management					
Job Position	Buyer (Tooling, Metals and Plastics Industry)					
Job Description	Carry out and coordinate daily procurement tasks as required by supervisor, include conducting and monitoring procurement activities					
Core Competency Level and Credit (for reference)	Level 3 (18 credits)					
Main Duties, Units of Competency and Functional Areas	Core Competency	Procure according to requirements for technology, production capacity, environmental protection, and quality	Unit of Competency			
			Code		Level	Credit
			106398L3 Conduct and monitor procurement to ensure timely acquisition of cost-effective and high-quality materials, semi-finished products, and services to meet production and operational needs, and monitor supplier performance		3	3
			106439L3 Apply basic metal material knowledge, to select material in suitable types and specifications for metal products to achieve required functionality		3	3
			106440L3 Apply basic plastic material knowledge, to select material in suitable types and specifications for plastic products to achieve required functionality		3	3
			106441L3 Apply basic tool steel knowledge, to select material in suitable types and specifications for moulds to achieve required functionality		3	3
			106383L4 Apply relevant environmental standards and regulations for products to assess capability of enterprises / suppliers in meeting environmental requirements		4	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations		3	3
			Minimum 5 years of functional area relevant experience is recommended			

Branches **Metal Industry**

Functional area **Product Quality Monitoring and Testing**

Role

QF
Level



Functional Area	Product Quality Monitoring and Testing				
Job position	Quality Manager (Metal Industry)				
Job Description	Establish and maintain quality management and environmental management systems for enterprise, and perform continuously improvement				
Core Competency Level and Credit (for reference)	Level 5 (23 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Establish and maintain quality management system, to analyse real time quality issues, resolve related problems, and perform continuous improvement	106558L5 Establish and maintain environmental management system to ensure compliance with local and international environmental regulations, systematically and continuously monitor, maintain, and improve environmental management	5	4
			106604L6 Establish and maintain quality management system to enhance competitiveness and positive image of enterprise through quality management	6	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Promote corporate quality management culture, develop continuous improvement strategies and measures	106593L5 Promote enterprise culture of quality management, address quality improvement suggestions, and continuously improve product quality while reducing operational losses and defects	5	4
			106594L5 Develop and maintain quality management policy and manual to ensure employees understand and implement effectively, thereby promoting culture of quality improvement within enterprise	5	4
	Additional Competency	Perform product tolerance and appearance inspection, defect analysis, and provide solutions to reduce quality issues	106529L4 Identify and analyse metallic materials, ensure properties and quality meet processing and delivery requirements	4	3
			106530L4 Analyse and improve appearance defects in metal parts, reduce defects, enhance product quality and production yield	4	3
			106531L4 Monitor, standardise various geometric dimension and tolerance measurement methods, ensure data reliability, improve production quality	4	4
		Screen and maintain various instruments and training technicians to conduct functional tests and analyses of various products	106532L4 Apply various testing standards, select and schedule suitable tests based on product requirements, analyse product inspection reports to enhance overall product quality control	4	6

			106534L4 Regulate use of measuring instruments and equipment, manage operators, and ensure testing quality	4	3
			106533L4 Select and develop required measuring instruments and equipment, meet the needs of daily measurement tasks	4	3
		Develop product quality inspection plan, review quality management system, and analyse real time quality data	106535L4 Write and maintain quality assurance procedures, ensure employees conduct quality inspections according to procedures, and continuously improve product quality and enhance operational efficiency	4	4
			106536L4 Develop product sampling plans and statistical process control (SPC) methods, and enhance quality monitoring	4	4
			106537L4 Plan and conduct quality management audits, ensure quality system meets customer, industry, international quality requirements, and achieves internal quality objectives	4	4
		Make timely report and recommendation to management to improve product quality in response to the real time status of product quality. Use data analysis methods to track various quality indicators (include pass rate, scrap rate, rework rate, etc.) to make precise judgments on quality data	111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
		Minimum 7 years of functional area relevant experience is recommended Minimum 2 years of metal quality assistant engineer, quality data assistant analyst / engineer or equivalent experience is recommended			

Functional Area	Product Quality Monitoring and Testing				
Job Position	Quality Assistant Engineer (Metals Industry)				
Job Description	Understand various measurement and testing methods, develop quality assurance programs, establish product sampling plans, and manage measuring instruments and equipment, testing methods, and operators				
Core Competency Level and Credit (for reference)	Level 4 (39 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Conduct product tolerance and appearance inspection, perform defect analysis, and provide solutions to reduce quality non-conformities	106529L4 Identify and analyse metallic materials, ensure properties and quality meet processing and delivery requirements	4	3
			106530L4 Analyse and improve appearance defects in metal parts, reduce defects, enhance product quality and production yield	4	3
			106531L4 Monitor, standardise various geometric dimension and tolerance measurement methods, ensure data reliability, improve production quality	4	4
		Screen and maintain various instruments, and train technicians to perform product function testing and analysis	106532L4 Apply various testing standards, select and schedule suitable tests based on product requirements, analyse product inspection reports to enhance overall product quality control	4	6
			106534L4 Regulate use of measuring instruments and equipment, manage operators, and ensure testing quality	4	3
			106533L4 Select and develop required measuring instruments and equipment, meet the needs of daily measurement tasks	4	3
		Develop product quality inspection plans, audit quality management systems, and analyse real-time quality data	106535L4 Write and maintain quality assurance procedures, ensure employees conduct quality inspections according to procedures, and continuously improve product quality and enhance operational efficiency	4	4
			106536L4 Develop product sampling plans and statistical process control (SPC) methods, and enhance quality monitoring	4	4
			106537L4 Plan and conduct quality management audits, ensure quality system meets customer, industry, international quality requirements, and achieves internal quality objectives	4	4
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5

	Additional Competency	Perform product geometric dimension and appearance inspection, use and calibrate instruments, and collect quality data in real time	106445L3 Conduct manual and automated geometric dimension measurement to ensure product dimensional accuracy meets customer and internal requirements	3	4
			106446L3 Conduct product testing to ensure product meets quality requirements	3	4
			106447L3 Calibrate, maintain, and service measuring instruments and equipment to ensure measurement accuracy	3	4
			106380L2 Perform visual inspection of metal parts, select parts that meet specifications, and identify common surface defects and their locations	2	3
			106370L1 Understand methods of usage and correctly operation of various commonly used basic measuring instruments and equipment	1	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
			Minimum 6 years of functional area relevant experience is recommended Minimum 2 years of metal quality control technician or equivalent experience is recommended		

Functional Area	Product Quality Monitoring and Testing					
Job Position	Quality Control Technician (Metals Industry)					
Job Description	Perform various inspections according to measurement and testing requirements, and calibrate, maintain, service measuring instruments and equipment					
Core Competency Level and Credit (for reference)	Level 3 (21 credits)					
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties Perform product geometric dimension and appearance inspection, use and calibrate instruments, and collect quality data in real time	Unit of Competency			
			Code		Level	Credit
			106445L3 Conduct manual and automated geometric dimension measurement to ensure product dimensional accuracy meets customer and internal requirements		3	4
			106446L3 Conduct product testing to ensure product meets quality requirements		3	4
			106447L3 Calibrate, maintain, and service measuring instruments and equipment to ensure measurement accuracy		3	4
			106380L2 Perform visual inspection of metal parts, select parts that meet specifications, and identify common surface defects and their locations		2	3
			106370L1 Understand methods of usage and correctly operation of various commonly used basic measuring instruments and equipment		1	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations		3	3
			Minimum 5 years of functional area relevant experience is recommended			

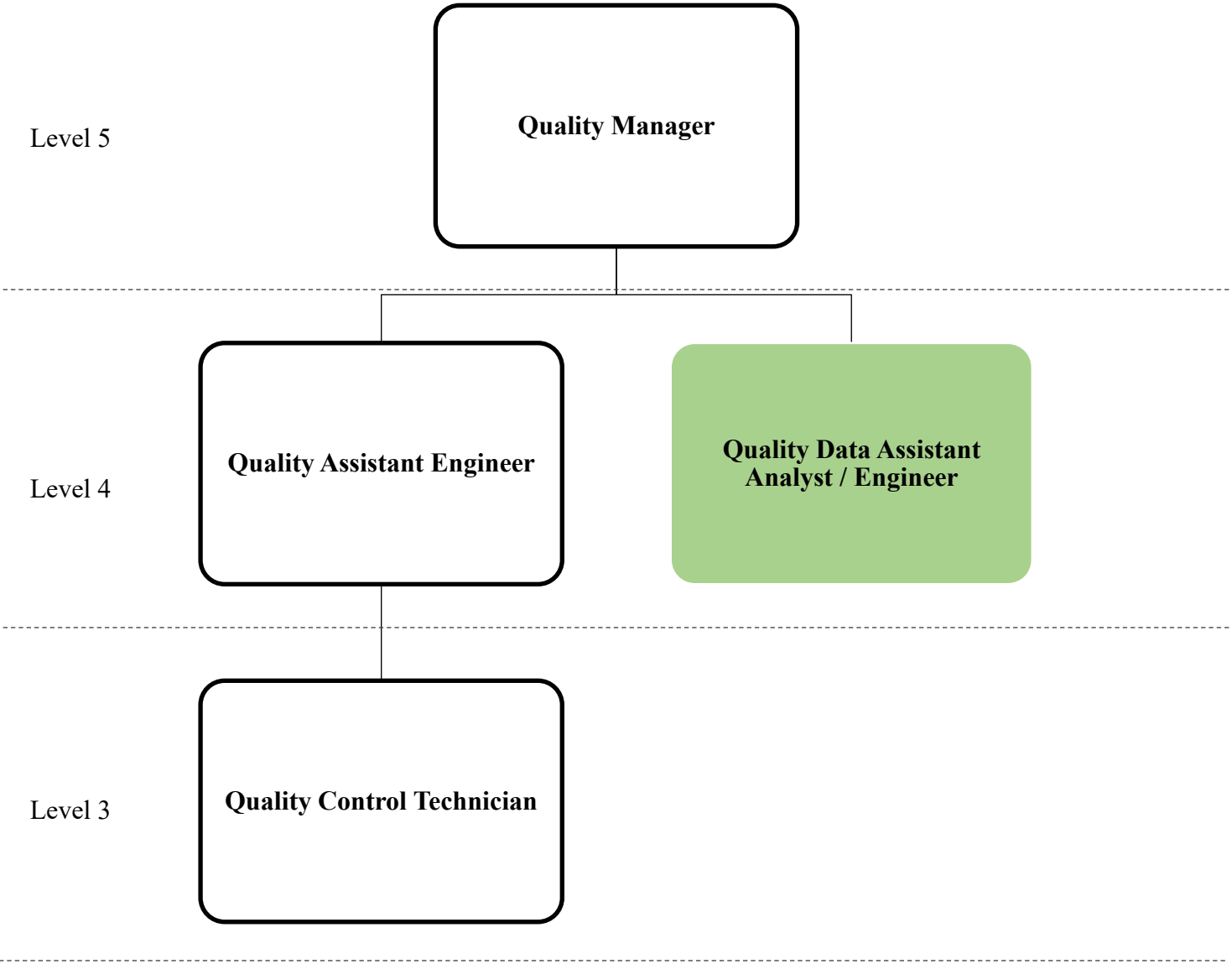
Functional Area	Product Quality Monitoring and Testing				
Job Position	Quality Data Assistant Analyst / Engineer (Metals Industry)				
Job Description	Analyse various quality data from metal processing, and propose suggestions for improving product quality and functionality				
Core Competency Level and Credit (for reference)	Level 4 (25 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Analyse data from the quality data platform to maintain product quality, understand various metal product testing methods, and effectively carry out monitoring and management	106530L4 Analyse and improve appearance defects in metal parts, reduce defects, enhance product quality and production yield	4	3
			106532L4 Apply various testing standards, select and schedule suitable tests based on product requirements, analyse product inspection reports to enhance overall product quality control	4	6
		Report to management and provide timely recommendations based on real-time product quality status to enhance product quality, use data analysis methods to track various quality indicators (include pass rate, scrap rate, rework rate, etc.), and make accurate judgments on quality data	111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
			Minimum 6 years of functional area relevant experience is recommended		

Branches **Plastics Industry**

Functional area **Product Quality Monitoring and Testing**

Role

QF
Level



Functional Area	Product Quality Monitoring and Testing				
Job position	Quality Manager (Plastics Industry)				
Job Description	Establish and maintain quality management and environmental management systems for enterprise, and perform continuous improvement				
Core Competency Level and Credit (for reference)	Level 5 (23 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Establish and maintain quality management system, to analyse real time quality issues, resolve related problems, and perform continuous improvement	106558L5 Establish and maintain environmental management system to ensure compliance with local and international environmental regulations, systematically and continuously monitor, maintain, and improve environmental management	5	4
			106604L6 Establish and maintain quality management system to enhance competitiveness and positive image of enterprise through quality management	6	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Promote corporate quality management culture, develop continuous improvement strategies and measures	106593L5 Promote enterprise culture of quality management, address quality improvement suggestions, and continuously improve product quality while reducing operational losses and defects	5	4
			106594L5 Develop and maintain quality management policy and manual to ensure employees understand and implement effectively, thereby promoting culture of quality improvement within enterprise	5	4
	Additional Competency	Perform product quality inspection and provide solutions to reduce quality issues	106444L3 Conduct quality inspection of plastic parts, identify defects, and assist in providing recommendations to improve product quality	3	3
			106531L4 Monitor, standardise various geometric dimension and tolerance measurement methods, ensure data reliability, improve production quality	4	4
		Screen and maintain various instruments and training technicians to conduct functional tests and analyses of various products	106532L4 Apply various testing standards, select and schedule suitable tests based on product requirements, analyse product inspection reports to enhance overall product quality control	4	6
			106534L4 Regulate use of measuring instruments and equipment, manage operators, and ensure testing quality	4	3

			106533L4 Select and develop required measuring instruments and equipment, meet the needs of daily measurement tasks	4	3
		Develop product quality inspection plan, review quality management system, and analyse real time quality data	106535L4 Write and maintain quality assurance procedures, ensure employees conduct quality inspections according to procedures, and continuously improve product quality and enhance operational efficiency	4	4
			106536L4 Develop product sampling plans and statistical process control (SPC) methods, and enhance quality monitoring	4	4
			106537L4 Plan and conduct quality management audits, ensure quality system meets customer, industry, international quality requirements, and achieves internal quality objectives	4	4
		Make timely report and recommendation to management to improve product quality in response to the real time status of product quality. Use data analysis methods to track various quality indicators (include pass rate, scrap rate, rework rate, etc.) to make precise judgments on quality data	111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
			111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5

Minimum 7 years of functional area relevant experience is recommended

Minimum 2 years of plastic quality assistant engineer, quality data assistant analyst / engineer or equivalent experience is recommended

Functional Area	Product Quality Monitoring and Testing				
Job Position	Quality Assistant Engineer (Plastics Industry)				
Job Description	Understand various measurement and testing methods, develop quality assurance programs, establish product sampling plans, and manage measuring instruments and equipment, testing methods, and operators				
Core Competency Level and Credit (for reference)	Level 4 (36 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Conduct product quality inspection and provide solutions to reduce quality non-conformities	106444L3		
			Conduct quality inspection of plastic parts, identify defects, and assist in providing recommendations to improve product quality	3	3
		Screen and maintain various instruments, and train technicians to perform product function testing and analysis	106531L4		
			Monitor, standardise various geometric dimension and tolerance measurement methods, ensure data reliability, improve production quality	4	4
			106532L4		
			Apply various testing standards, select and schedule suitable tests based on product requirements, analyse product inspection reports to enhance overall product quality control	4	6
			106534L4		
			Regulate use of measuring instruments and equipment, manage operators, and ensure testing quality	4	3
			106533L4		
			Select and develop required measuring instruments and equipment, meet the needs of daily measurement tasks	4	3
		Develop product quality inspection plans, audit quality management systems, and analyse real-time quality data	106535L4		
			Write and maintain quality assurance procedures, ensure employees conduct quality inspections according to procedures, and continuously improve product quality and enhance operational efficiency	4	4
			106536L4		
			Develop product sampling plans and statistical process control (SPC) methods, and enhance quality monitoring	4	4
	Additional	Perform product geometric dimension and appearance inspection, use and	106537L4		
			Plan and conduct quality management audits, ensure quality system meets customer, industry, international quality requirements, and achieves internal quality objectives	4	4
			111551L4		
			Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
			106442L3		
			Assist analysis of plastic quality to support product quality control	3	3

		calibrate instruments, and collect quality data in real time	106443L3 Conduct visual inspection of plastic parts to assist in improving product quality and evaluating processing methods	3	3
			106445L3 Conduct manual and automated geometric dimension measurement to ensure product dimensional accuracy meets customer and internal requirements	3	4
			106446L3 Conduct product testing to ensure product meets quality requirements	3	4
			106447L3 Calibrate, maintain, and service measuring instruments and equipment to ensure measurement accuracy	3	4
			106370L1 Understand methods of usage and correctly operation of various commonly used basic measuring instruments and equipment	1	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
			Minimum 6 years of functional area relevant experience is recommended Minimum 2 years of plastic quality control technician or equivalent experience is recommended		

Functional Area	Product Quality Monitoring and Testing					
Job Position	Quality Control Technician (Plastics Industry)					
Job Description	Perform various inspections according to measurement and testing requirements, and calibrate, maintain, service measuring instruments and equipment					
Core Competency Level and Credit (for reference)	Level 3 (24 credits)					
Main Duties, Units of Competency and Functional Areas	Core Competency	Perform product geometric dimension and appearance inspection, use and calibrate instruments, and collect quality data in real time	Unit of Competency			
			Code		Level	Credit
			106442L3 Assist analysis of plastic quality to support product quality control		3	3
			106443L3 Conduct visual inspection of plastic parts to assist in improving product quality and evaluating processing methods		3	3
			106445L3 Conduct manual and automated geometric dimension measurement to ensure product dimensional accuracy meets customer and internal requirements		3	4
			106446L3 Conduct product testing to ensure product meets quality requirements		3	4
			106447L3 Calibrate, maintain, and service measuring instruments and equipment to ensure measurement accuracy		3	4
			106370L1 Understand methods of usage and correctly operation of various commonly used basic measuring instruments and equipment		1	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations		3	3
			Minimum 5 years of functional area relevant experience is recommended			

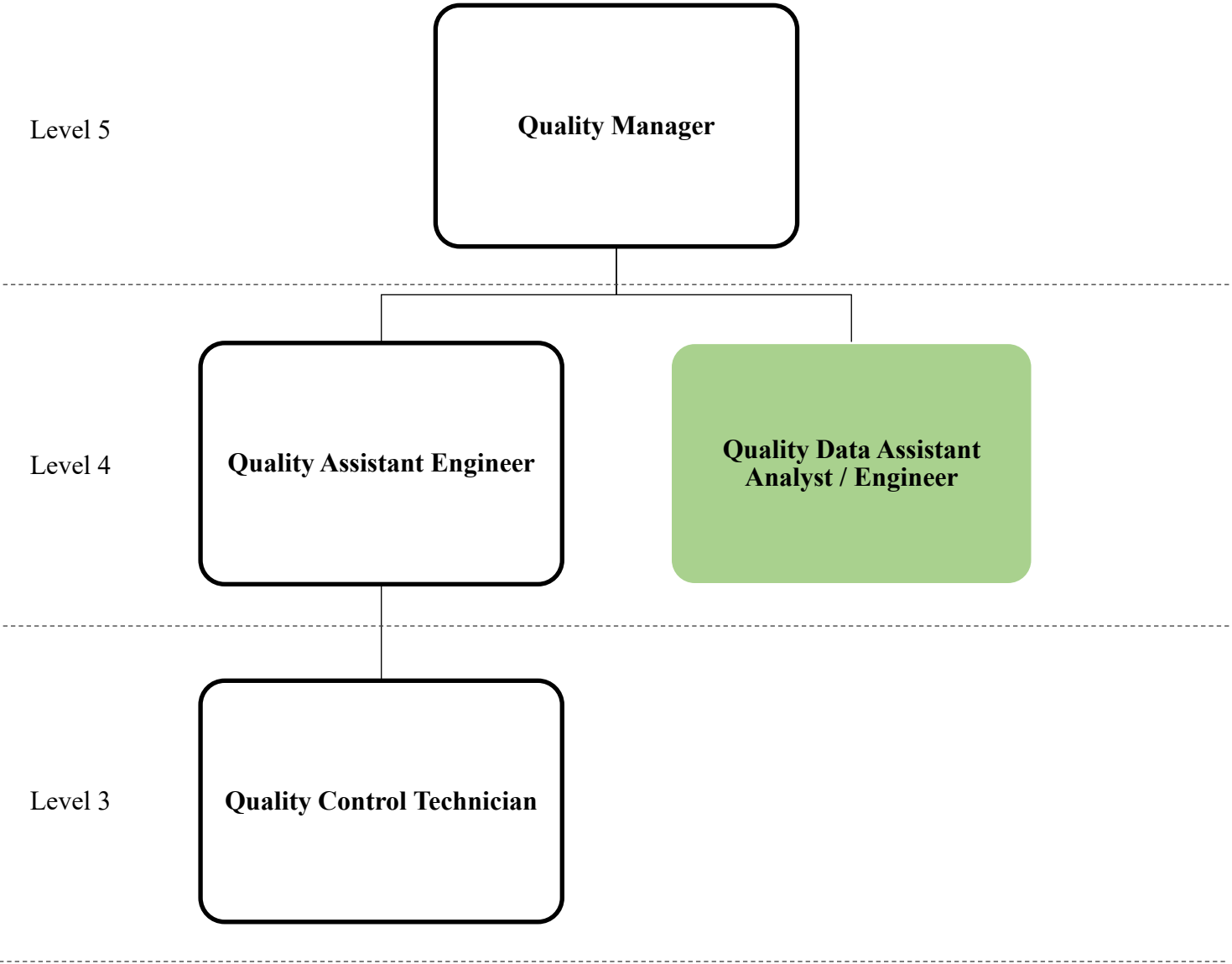
Functional Area	Product Quality Monitoring and Testing					
Job Position	Quality Data Assistant Analyst / Engineer (Plastics Industry)					
Job Description	Analyse various quality data from plastic processing, and propose suggestions for improving product quality and functionality					
Core Competency Level and Credit (for reference)	Level 4 (25 credits)					
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency			
			Code	Level	Credit	
		Analyse data from the quality data platform to maintain product quality, understand various plastic product testing methods, effectively carry out monitoring and management	106532L4 Apply various testing standards, select and schedule suitable tests based on product requirements, analyse product inspection reports to enhance overall product quality control	4	6	
			106444L3 Conduct quality inspection of plastic parts, identify defects, and assist in providing recommendations to improve product quality	3	3	
			Report to management and provide timely recommendations based on real-time product quality status to enhance product quality, use data analysis methods to track various quality indicators (include pass rate, scrap rate, rework rate, etc.), and make accurate judgments on quality data	111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
				111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
				111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
Minimum 6 years of functional area relevant experience is recommended						

Branches **Tooling Industry**

Functional area **Product Quality Monitoring and Testing**

Role

QF
Level



Functional Area	Product Quality Monitoring and Testing				
Job position	Quality Manager (Tooling Industry)				
Job Description	Establish and maintain quality management and environmental management systems for enterprise, and perform continuously improvement				
Core Competency Level and Credit (for reference)	Level 5 (27 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Establish and maintain quality management system, to analyse real time quality issues, resolve related problems, and perform continuous improvement	106558L5 Establish and maintain environmental management system to ensure compliance with local and international environmental regulations, systematically and continuously monitor, maintain, and improve environmental management	5	4
			106604L6 Establish and maintain quality management system to enhance competitiveness and positive image of enterprise through quality management	6	6
			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
		Promote corporate quality management culture, develop continuous improvement strategies and measures	106592L5 Establish and maintain mould management system to improve the overall mould management level	5	4
			106593L5 Promote enterprise culture of quality management, address quality improvement suggestions, and continuously improve product quality while reducing operational losses and defects	5	4
			106594L5 Develop and maintain quality management policy and manual to ensure employees understand and implement effectively, thereby promoting culture of quality improvement within enterprise	5	4
	Additional Competency	Perform mould tolerance and appearance inspection, provide solutions to reduce quality issues	106527L4 Conduct mould assembly and internal / external quality inspection, ensure dimensional accuracy and surface quality	4	4
			106528L4 Conduct mould testing and provide recommendations for structural, functional design and processing adjustments based on test results, ensure parts produced by the mould meet quality requirements and production efficiency	4	4
			106531L4 Monitor, standardise various geometric dimension and tolerance measurement methods, ensure data reliability, improve production quality	4	4

		Screen and maintain various instruments and training technicians to conduct functional tests and analyses of various products	106532L4 Apply various testing standards, select and schedule suitable tests based on product requirements, analyse product inspection reports to enhance overall product quality control	4 6
			106534L4 Regulate use of measuring instruments and equipment, manage operators, and ensure testing quality	4 3
			106533L4 Select and develop required measuring instruments and equipment, meet the needs of daily measurement tasks	4 3
		Develop product quality inspection plan, review quality management system, and analyse real time quality data	106535L4 Write and maintain quality assurance procedures, ensure employees conduct quality inspections according to procedures, and continuously improve product quality and enhance operational efficiency	4 4
			106536L4 Develop product sampling plans and statistical process control (SPC) methods, and enhance quality monitoring	4 4
			106537L4 Plan and conduct quality management audits, ensure quality system meets customer, industry, international quality requirements, and achieves internal quality objectives	4 4
		Make timely report and recommendation to management to improve product quality in response to the real time status of product quality. Use data analysis methods to track various quality indicators (include pass rate, scrap rate, rework rate, etc.) to make precise judgments on quality data	111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4 6
			111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4 5
	Minimum 7 years of functional area relevant experience is recommended			
	Minimum 2 years of mould quality assistant engineer, quality data assistant analyst / engineer or equivalent experience is recommended			

Functional Area	Product Quality Monitoring and Testing				
Job Position	Quality Assistant Engineer (Tooling Industry)				
Job Description	Understand various measurement and testing methods, develop quality assurance programs, establish product sampling plans, and manage measuring instruments and equipment, testing methods, and operators				
Core Competency Level and Credit (for reference)	Level 4 (41 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Conduct mould tolerance and appearance inspection, and provide solutions to reduce quality non-conformities	106527L4 Conduct mould assembly and internal / external quality inspection, ensure dimensional accuracy and surface quality	4	4
			106528L4 Conduct mould testing and provide recommendations for structural, functional design and processing adjustments based on test results, ensure parts produced by the mould meet quality requirements and production efficiency	4	4
			106531L4 Monitor, standardise various geometric dimension and tolerance measurement methods, ensure data reliability, improve production quality	4	4
		Screen and maintain various instruments, and train technicians to perform product function testing and analysis	106532L4 Apply various testing standards, select and schedule suitable tests based on product requirements, analyse product inspection reports to enhance overall product quality control	4	6
			106534L4 Regulate use of measuring instruments and equipment, manage operators, and ensure testing quality	4	3
			106533L4 Select and develop required measuring instruments and equipment, meet the needs of daily measurement tasks	4	3
		Develop product quality inspection plans, audit quality management systems, and analyse real-time quality data	106535L4 Write and maintain quality assurance procedures, ensure employees conduct quality inspections according to procedures, and continuously improve product quality and enhance operational efficiency	4	4
			106536L4 Develop product sampling plans and statistical process control (SPC) methods, and enhance quality monitoring	4	4
			106537L4 Plan and conduct quality management audits, ensure quality system meets customer, industry, international quality requirements, and achieves internal quality objectives	4	4

			111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
	Additional Competency	Perform product geometric dimension and appearance inspection, use and calibrate instruments, and collect quality data in real time	106445L3 Conduct manual and automated geometric dimension measurement to ensure product dimensional accuracy meets customer and internal requirements	3	4
			106446L3 Conduct product testing to ensure product meets quality requirements	3	4
			106447L3 Calibrate, maintain, and service measuring instruments and equipment to ensure measurement accuracy	3	4
			106370L1 Understand methods of usage and correctly operation of various commonly used basic measuring instruments and equipment	1	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
			Minimum 6 years of functional area relevant experience is recommended Minimum 2 years of mould quality control technician or equivalent experience is recommended		

Functional Area	Product Quality Monitoring and Testing				
Job Position	Quality Control Technician (Tooling Industry)				
Job Description	Perform various inspections according to measurement and testing requirements, and calibrate, maintain, service measuring instruments and equipment				
Core Competency Level and Credit (for reference)	Level 3 (18 credits)				
Main Duties, Units of Competency and Functional Areas		Main Duties	Unit of Competency		
			Code	Level	Credit
	Core Competency	Conduct product geometric dimension and appearance inspection, use and calibrate instruments, and collect quality data in real time	106445L3 Conduct manual and automated geometric dimension measurement to ensure product dimensional accuracy meets customer and internal requirements	3	4
			106446L3 Conduct product testing to ensure product meets quality requirements	3	4
			106447L3 Calibrate, maintain, and service measuring instruments and equipment to ensure measurement accuracy	3	4
			106370L1 Understand methods of usage and correctly operation of various commonly used basic measuring instruments and equipment	1	3
			111548L3 Understand Industry 4.0, gain basic understanding of its content, application scope, data collection methods, benefits of digital operations for enterprises, and basic cybersecurity knowledge required for implementing data-driven operations	3	3
			Minimum 5 years of functional area relevant experience is recommended		

Functional Area	Product Quality Monitoring and Testing					
Job Position	Quality Data Assistant Analyst / Engineer (Tooling Industry)					
Job Description	Analyse quality data from mould processing, and propose suggestions for improving product quality and functionality					
Core Competency Level and Credit (for reference)	Level 4 (26 credits)					
Main Duties, Units of Competency and Functional Areas	Core Competency	Main Duties	Unit of Competency			
			Code	Level	Credit	
		Analyse data from the quality data platform to maintain mould quality, understand various mould testing methods, and effectively carry out monitoring and management	106528L4 Conduct mould testing and provide recommendations for structural, functional design and processing adjustments based on test results, ensure parts produced by the mould meet quality requirements and production efficiency	4	4	
			106532L4 Apply various testing standards, select and schedule suitable tests based on product requirements, analyse product inspection reports to enhance overall product quality control	4	6	
			Respond to the real-time status of mould quality, provide timely reports and recommendations to management to enhance mould quality, apply data analysis methods to track various quality indicators (include pass rate, scrap rate, rework rate, etc.), and make accurate judgments on quality data	111549L4 Establish and apply Industry 4.0 enterprise database, conduct data analysis, understand data-driven operation models, provide feedback recommendations to enhance departmental operations and performance	4	6
				111550L4 Apply Industry 4.0 implementation tools, include hardware and software, to collect and utilise data across different operational areas of enterprise	4	5
				111551L4 Introduce and apply Industry 4.0, understand the scope, departments, necessary tools and facilities for implementation, and identify data on visual dashboards for monitoring and initial analysis	4	5
Minimum 6 years of functional area relevant experience is recommended						