

Specification of Competency Standards
for the Manufacturing Technology.
Unit of Competency.

Functional Area - Process Design and Development

Title	Plan and set up automation systems to improve level of automated manufacturing in enterprises
Code	106586L6
Range	This unit of competency is applicable to the product design and development departments, process design and development departments / engineering departments, and product manufacturing departments / production departments of companies in the manufacturing technology industry. Practitioners should be capable to understand enterprise's needs for automated assembly and subsequently plan and configure automated systems
Level	6
Credit	5
Competency	Performance Requirements - Understand relevant knowledge of plan and set up automated systems - Understand overall production process within the enterprise - Understand processing methods and patterns of each step - Understand conditions under which automation can be implemented, include quantity, type, and shape of the products, etc. - Understand components and functions of automated systems - Understand methods and techniques for storing, integrating, and expanding data in automated systems - Understand methods and techniques of tooling and fixture standardisation - Understand various cutting - edge technologies, advantages, and disadvantages of automation systems on the market - Understand methods, facilities, systems for collect and evaluate production, quality, and machinery data in various automated systems - Plan and set up automation systems - Able to research and implement various feasible automation solutions to meet product requirements - Able to plan production machinery, tools, and fixtures required for automated systems - Able to study and create operational sequence of automated systems in different branches, modes, communication methods between the systems, and conduct complex planning to set up future integration and expansion mechanisms - Able to plan suitable tooling fixtures, pneumatic devices, hydraulic devices, electrical devices, multi - axis robots, etc. for automated systems - Able to create, adjust, and optimise the system base on technical limitations - Able to propose new standards for automated system efficiency and drive continuous standard optimisation - Able to collect various production, quality, and machinery data from different automated systems, conduct in depth research and critical analysis, make decisions on optimisation methods for automation - Able to master new technologies in automation systems and research how to apply to production lines - Professional handling of plan and set up automation systems

	• Able to plan and configure automated systems based on factors such as safety, production volume, quality, and compatibility with intelligent operations • Able to ensure the developed automated system can be operated safely
Assessment Criteria	The integrated outcome requirements of this unit of competency are: • Able to research, plan, and create automated systems to meet the needs of enterprise • Able to adapt to engineering constraints, transform and develop new automation systems • Able to evaluate and critique effectiveness of automated systems to determine system regulation and upgrades, and study solutions for optimisation
Remark	This is the updated version of UoC 106586L5