

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

Functional Area - Product Design and Development

Title	Create product concepts and manage design changes to ensure engineering designs meet the latest requirements
Code	106485L5
Range	This unit of competency is applicable to the product design and development departments / engineering departments of enterprises in the manufacturing technology industry. Practitioners should be capable to analyse customer and market requirements for product appearance and functionality, create and screen product concepts, and manage various changes during the design process
Level	5
Credit	6
Competency	Performance Requirements - Understand relevant knowledge of product concept creation and design change requirements management - Understand types of commonly used, new materials and its applications in product design - Be familiar with product design methodologies and principles - Understand content of market research reports and product development trends - Understand enterprise's communication mechanisms for product development projects and its product engineering change management mechanisms - Understand international standards for construction management and engineering change management, including ISO 10007 etc. - Manage product concept creation and design modification requirements - Able to collect customer or market requirements regard to product appearance and functionality - Able to analyse and evaluate feasibility of various customer or market requirements in actual product design, provide feedback and suggestions, and explain reasons behind them - Able to lead product design teams to create product design concepts using various product concept creation methodologies, including TRIZ, brainstorming, analogy, function matrix, and function mapping - Able to effectively communicate with clients and relevant departments, and articulate various considerations in product design - Able to effectively utilise enterprise product engineering change management and digital tools to manage and record various engineering changes, and publish engineering change requirements to all relevant engineering personnel - Able to review product design outcomes and ensure engineering designs comply with latest market and regulatory requirements - Able to continuously review various latest innovative methods, select appropriate innovative methods, and promote them internally - Professional handling of product concept creation and design modification requirements management - Able to consider wide range of factors such as safety, risk, production capacity, quality, environmental protection, and cost, and create product concepts and modify designs to coordinate and meet various requirements

Assessment Criteria	The integrated outcome requirements of this unit of competency are: • Able to use various innovative tools to create product design concepts • Able to manage changes to product appearance and functionality, effectively communicating with clients or relevant departments, and ensure engineering designs comply with latest market and regulatory requirements
Remark	This is the updated version of UoC 106485L4