

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

Functional Area - Product Design and Development

Title	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
Code	106491L3
Range	This unit of competency is applicable to the marketing, sales and customer management departments / marketing departments and product design and development departments / engineering departments of companies engaged in the metal industries. Practitioners should be capable to understand the general concepts of metal product manufacturing processes, and are able to clearly articulate these concepts for internal and customer communication in daily operations
Level	3
Credit	3
Competency	Performance Requirements - Understand relevant knowledge of the general concepts in metal product manufacturing processes - Understand characteristics of common metal product manufacturing processes, such as stamping, die casting, casting, and extrusion - Understand requirements of physical and electronic 2D and 3D drawings, include tolerances, materials, surface treatments, and testing specifications - Understand customer-specified quality standards - Understand types, working principles, applications, and specifications of commonly used metal processing equipment - Understand procedures, methods, and equipment used in automated metal product processing and inspection - Understand latest developments in metal product manufacturing industry - Understand concept, features, and practical applications of smart manufacturing in metal product processes - Apply concepts of metal product manufacturing processes in internal and customer communication - Able to read and interpret requirements of drawings - Able to communicate with customers regarding metal product manufacturing methods, include preliminary enterprise of overall processes, individual process steps, surface treatments, and material selection - Able to preliminarily assess and communicate the complexity of metal product manufacturing, as well as required equipment and resources - Able to make preliminary cost estimations for metal product manufacturing, include raw material costs, equipment costs, time costs, and labour costs, to assist in quotation preparation - Able to convey customer requirements to internal staff in clear and professional manner - Professional handling of metal product manufacturing processes - Able to continuously learn and update knowledge on metal product manufacturing processes to align with industry trends - Able to improve communication skills and techniques for professional and effective exchanges

Assessment Criteria	The integrated outcome requirements of this unit of competency are: • Able to read and interpret the requirements of drawings, preliminarily estimate manufacturing processes, number of steps, materials, and required equipment for common metal products, and communicate this information internally • Able to make preliminary cost estimates for manufacturing processes and metal products, include raw materials, equipment, time, and labour, to support quotation preparation, and communicate effectively with external customers in daily business interactions
Remark	This is the updated version of UoC 106491L4