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

Functional Area - Process Design and Development

Title	Tooling manufacturing process planning
Code	106583L5
Range	This unit of competency is applicable to the engineering or manufacturing development or production department of the tooling manufacturing corporations. Practitioners should be capable to understand the tooling manufacturing process planning, and base on the characteristics of tooling manufacturing process to design appropriate manufacturing process
Level	5
Credit	6 （For Reference Only）
Competency	Performance Requirements 1. Understand the techniques and technologies and manufacturing process of tooling • Understand the characteristics of all kinds of tooling manufacturing process, such as preparation of materials, milling, turning, heat treatment, heat treatment, EDM, wire cutting, grinding and polishing • Understand the classifications, processing techniques and methods of rough and precision machining • Understand the functions of different types of machine • Understand the performance and difference of different types of machine 2. Tooling manufacturing process planning • Examine the requirements of customers, tooling and finished goods, select the appropriate manufacturing processes, types and models for processing • Analyse the actual conditions of different equipment in shopfloor, adjust and optimize the tooling manufacturing process • Estimates the tooling processing time and completion time • Analyse the tooling delivery and equipment utilization, formulate the production scheduling plan • Formulate key performance indicators for production efficiency and quality, and also the measurement and plans • Recognise the important quality monitoring points in all stages of the manufacturing process and the corresponding supervise and monitoring methods • Collect the latest status of all equipment in shopfloor, for record and analysis and deal with all emergencies, reduce the impact of equipment failure or any questions about the overall production scheduling plan • Continuously recognise new technologies related to tooling manufacturing 3. Professional handling of tooling manufacturing process planning • Carefully consider elements of safety, risk, capacity, quality, environmental protection and cost etc, design, plan and optimise tooling manufacturing process, ensure safety operation and also meet all aspects of requirements
Assessment Criteria	The integrated outcome requirements of this unit of competency are: • Capable to select suitable production equipment in accordance with all kinds of requirements and the actual situation of the shopfloor • Capable to formulate production scheduling plan, and carry out flessible revision in accordance with idiopathic cases
Remark	Preparation : Including procurement of tooling and steel and manufacture the steel into an appropriate size