

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

Functional Area - Product Design and Development

Title	Integration of product conceptual design and engineering
Code	106574L5
Range	This unit of competency is applicable to design and development departments of Manufacturing Technology Industry. Practitioners should be capable to carry out Integration of product conceptual design and engineering in accordance with the corporate internal requirements and customers feedback
Level	5
Credit	3 (For Reference Only)
Competency	<p>Performance Requirements</p> <ol style="list-style-type: none"> 1. Understand knowledge of integration of product conceptual design and engineering <ul style="list-style-type: none"> • Understand all kinds of foundation methods of inspiring the product concept, such as a Brain Storming, analogy, function matrix and functional mapping • Understand all types, characteristics, applications and price of materials on the market • Understand the engineering restrictions of product conceptual design brought by the corporate production technology • Recognise common design software on the market, such as CAD / CAE 2. Carry out integration of product conceptual design and engineering <ul style="list-style-type: none"> • Draw or use design software to express the design idea, such as appearance shapes, colours, materials and surface treatment • Select the appropriate material for the product • According to the collected industrial data, trends, development trend, carry out concept design and functional planning for product • According to the engineering restrictions to adjust the design, so as to realise the product • Communicate with the marketing, production and quality control departments, inject different design concepts into products 3. Professional handling of integration of product conceptual design and engineering <ul style="list-style-type: none"> • Carefully consider elements of safety, risk, capacity, quality, environmental protection and cost etc, carry out integration of product conceptual design and engineering and also meet all aspects of requirements
Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are:</p> <ul style="list-style-type: none"> • Capable to carry out Integration of product conceptual design and engineering in accordance with the corporate internal requirements and customers feedback
Remark	