

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

Functional Area - Product Design and Development

Title	Manufacture prototypes with rapid prototyping technologies
Code	106392L3
Range	This unit of competency is applicable to each design and development departments of manufacturing technology industry. Practitioners should be capable to apply rapid prototyping and rapid prototyping machine, carry out rapid prototyping.
Level	3
Credit	6 (For Reference Only)
Competency	<p>Performance Requirements</p> <p>1. Understand the knowledge of rapid prototyping</p> <ul style="list-style-type: none"> • Understand principles and application methods of all kinds of commonly used rapid prototyping. • Understand the requirements of file accuracy and format, including STL, SLC, DXF and JSD etc. • Understand all kinds of image converting methods and relevant operation methods of conversion programs. • Understand the methods of preventive maintenance and troubleshooting of rapid prototyping machine. <p>2. Manufacture samples by applying rapid prototyping</p> <ul style="list-style-type: none"> • Operate basic operations of rapid prototyping machine, such as switching systems, read, save, and format conversion • Adjust various parameters of 3D computer model, such as accuracy, density and stratification spacing • Review, adjust and control needed working environment for rapid prototyping • Regularly preventively maintain rapid prototyping machine, and solve all kinds of common operation problems of rapid prototyping machine <p>3. Professional handling of manufacturing samples by applying rapid prototyping</p> <ul style="list-style-type: none"> • Carefully consider elements of safety, risk, productivity, quality, environmental protection and cost, apply rapid prototyping machine to manufacture samples, so as to meet all requirements
Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are:</p> <ul style="list-style-type: none"> • Capable to handle all kinds of data of computer rapid prototyping, including file format conversion and 3D model parameters adjustment. • Capable to operate rapid prototyping machine to manufacture suitable samples.
Remark	