Unit of Competency

Functional Area: Design

Title	Apply Rapid Prototyping Techniques for Timepiece Components
Code	104845L3
Range	This unit of competency (UoC) is applicable in the design department of timepiece companies. It covers the abilities to understand various rapid prototyping techniques and the output of files for prototyping.
Level	3
Credit	3 (for reference only)
Competency	Performance Requirements 1. Possess the knowledge of rapid prototyping of timepiece components • Understand the following rapid prototyping application theories • Laser block print method • Optional laser coagulation • Solid ground curing • Chemical vapor deposition • Three-dimensional printing • Spherical particle modeling • Compound target modeling method 2. Apply rapid prototyping techniques for timepiece components • Master the application of silicon sulphide plastic moulds at room temperature • Master the application of spinning casting • Master the application of lost wax casting • Master the application of metal spraying • Master the production, casting and application of direct cases • Master the conversion of computer-aided physical model files into rapid prototyping files • Master the application of STL integrated image files • Employ the manufacturing technique of rapid prototyping to make prototypes of timepiece products, including that for timepiece components 3. Exhibit professionalism • Employ rapid prototyping techniques to make prototypes of timepiece products according to the safety guidelines of the Occupational Safety and Health Ordinance
Assessment Criteria	The integrated outcome requirements of this UoC are the abilities to: • Apply rapid prototyping techniques to make prototypes of timepiece products, including that for timepiece components e.g. dial, case and band; and • Output files for prototyping.
Remark	