

Specification of Competency Standards
for the Jewellery Industry
Unit of Competency

Functional Area - Production

Title	Employ computerized rapid prototyping techniques in the jewellery industry
Code	108958L4
Range	This unit of competency is applicable to practitioners working in the computerized rapid prototyping or design department of jewellery manufacturing organizations. Practitioners should be capable of making careful analysis and judgments. They should be able to employ computerized rapid prototyping techniques in the jewellery industry to integrate various kinds of manual prototyping techniques, so as to enhance the quality and production effectiveness of prototyping and to further apply such techniques in product development.
Level	4
Credit	9
Competency	Performance Requirements 1. Understand the processing methods in jewellery manufacturing • Know about the jewellery manufacturing techniques ○ Manual wax prototype carving ○ Manual silver prototyping ○ Casting ○ Mould trimming/goldsmithing ○ Gemstone setting ○ Grinding/electroplating ○ Electroforming 2. Employ computerized rapid prototyping techniques • Master the advantages of employing computerized prototyping techniques ○ Meet the requirements of high precision products ○ Enhance the quality of casting pieces and improve the variation in the thickness of the cross section of the casting mould ○ Reduce the time needed for each manufacturing process • Co-ordinate the duties of production and development in each department ○ Integrate machine prototyping techniques and manual prototyping techniques ○ Meet the gemstone setting requirements of the stone-setting department ○ Enhance the quality of casting pieces ○ Master the vulcanizing method and casting method of rapid prototyping ○ Communicate with the staff in the design department to tie in with the development of innovative design patterns 3. Professionalism • Following the requirements of the organization, code of practice and safety guidelines, carry out computerized jewellery rapid prototyping with a professional attitude
Assessment Criteria	The integrated outcome requirements of this unit of competency are: • Able to apply rapid prototyping techniques to enhance the quality and production effectiveness of jewellery products; and • Analyze and assess the strengths and weaknesses of applying computerized rapid prototyping techniques in the jewellery industry, so as to co-ordinate the manufacturing techniques in each department to complement the deficiencies in both machine prototyping and manual prototyping techniques.
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