

**Specification of Competency Standards**  
**for the Jewellery Industry**  
**Unit of Competency**

Functional Area - Production

Title	Apply CAD/CAM technology in jewellery manufacturing
Code	108948L3
Range	This unit of competency is applicable to practitioners working in the jewellery computer model production and design department of jewellery manufacturing organizations. Practitioners should be capable of making careful analysis and judgments. They should be able to make analysis independently according to the information contained in the hand-drawn design sketch, and draw computerized design for jewellery by using CAD (computer-aided design) software to tie in with the manufacturing procedure, thus fulfilling the requirements of design display and rapid prototyping.
Level	3
Credit	6
Competency	<p>Performance Requirements</p> <p>1. Understand the structure of jewellery and the requirements of design sketches</p> <ul style="list-style-type: none"> <li>• Know about the concept, characteristics and requirements of design sketches</li> <li>• Master the construction of 3-D patterns for jewellery</li> <li>• Know about the basic structure of jewellery <ul style="list-style-type: none"> <li>○ The stone-setting methods and their presentation in drawing</li> <li>○ The hinges/findings of jewellery and their application</li> </ul> </li> </ul> <p>2. Master the operation of CAD software</p> <ul style="list-style-type: none"> <li>• Master 2-D/3-D prototyping methods</li> <li>• Master the use of the database in the CAD software</li> <li>• Determine the sizes and measurements of jewellery and the ring sizes</li> <li>• Master the thickness of jewellery and the weight of the materials used</li> <li>• Prepare materials for replacement as a result of shrinkage from die-casting</li> <li>• Master the allocation of materials and lighting techniques necessary for 3-D design</li> </ul> <p>3. Professionalism</p> <ul style="list-style-type: none"> <li>• Respect intellectual property and avoid plagiarism, preventing individuals and the organization from falling into the trap of infringement of intellectual property rights</li> </ul>
Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are:</p> <ul style="list-style-type: none"> <li>• Able to understand thoroughly the manufacturing operations and make analysis independently according to the information contained in the hand-drawn design sketch, and draw computerized design for jewellery by using CAD software; and</li> <li>• Match with the manufacturing operations to effectively fulfil the requirements of design display and rapid prototyping.</li> </ul>
Remark	