

Specification of Competency Standards of the Watch & Clock Industry

**Unit of Competency**

**Functional Area: Design**

Title	Apply 3-dimensional Modelling Applications to Timepiece Design
Code	104852L4
Range	This unit of competency (UoC) is applicable in the design department of timepiece companies. It covers the abilities to use 3-dimensional modelling applications to design timepieces; simulate the real image of a complete watch, and provide data to support or assist the production.
Level	4
Credit	6 (for reference only)
Competency	<p>Performance Requirements</p> <ol style="list-style-type: none"> <li>1. Understand various 3-dimensional modelling applications <ul style="list-style-type: none"> <li>• Understand the uses, types and characteristics of 3-dimensional modelling applications</li> </ul> </li> <li>2. Apply 3-dimensional modelling applications to timepiece design <ul style="list-style-type: none"> <li>• Master 3-dimensional modelling applications, including: <ul style="list-style-type: none"> <li>• File creation for parts, assembly, etc.</li> <li>• Select drawing plane</li> <li>• Draw plane sketch</li> <li>• Edit plane sketch</li> <li>• Add/delete relation</li> <li>• Use plan</li> <li>• Use axis and coordinates</li> <li>• Build solid models</li> <li>• Build features, such as: base, cut, pierce, shaping, etc.</li> <li>• Operate features, such as: fillet, chamfer, mirror, pattern, etc.</li> <li>• Advanced 3-D model building</li> <li>• Combine solid and surface</li> <li>• Apply measurement and section properties</li> <li>• Use assembly parts</li> <li>• Produce engineering drawings</li> <li>• Output physical simulation pictures and fragments of engineering structures</li> </ul> </li> <li>• Manage or assist in file output with numerical control machining, rapid prototyping and engineering analysis <ul style="list-style-type: none"> <li>• Mould design <ul style="list-style-type: none"> <li>• Two-part mould</li> <li>• Four-part mould</li> </ul> </li> </ul> </li> </ul> </li> <li>3. Exhibit professionalism <ul style="list-style-type: none"> <li>• Respect intellectual property to prevent plagiarization, so as to avoid individual person and the organization to fall into the trap of infringement</li> </ul> </li> </ol>
Assessment Criteria	<p>The integrated outcome requirements of this UoC are the abilities to:</p> <ul style="list-style-type: none"> <li>• Use 3-dimensional modelling applications to carry out timepiece product design; and</li> <li>• Simulate the real image of a complete watch and fragments of engineering structures to provide data in order to manage or assist in the production of timepiece products.</li> </ul>
Remark	