

Specification of Competency Standards
for the Jewellery Industry
Unit of Competency

Functional Area - Design

Title	Master the new technology of jewellery and carry out innovative jewellery design
Code	108904L6
Range	This unit of competency is applicable to senior designers working in the jewellery design department of the jewellery industry. Practitioners should be capable of making careful analysis and judgment. They should be able to master the knowledge and operation of the new technology for jewellery manufacturing/production, and conduct research and development of innovative jewellery design.
Level	6
Credit	9
Competency	<p>Performance Requirements</p> <p>1. Understand the relationship between new technology and design, and the importance of intellectual property in jewellery design</p> <ul style="list-style-type: none"> • Understand thoroughly the new technologies used in jewellery design and manufacturing/production, such as: <ul style="list-style-type: none"> ○ 3-D computer-aided drawing and design ○ Computer numerical control (CNC) machining technology ○ Computer rapid prototyping technology ○ 3-D precious metal printing and sintering technology ○ Laser cutting and laser welding ○ Materials science (e.g. ceramic materials, polymers, metal alloys, carbon fibres and composite materials) • Know about the operation of the new technologies, such as: <ul style="list-style-type: none"> ○ Create 3-D computer drawings ○ Use automatic cutting machines to cut the required materials through the control of computer data, and know about its limitations ○ Know about the arrangement methods and operation techniques of prototype drawings to produce rapid prototyping models ○ Laser cutting and laser welding technology, as well as the characteristics and reactions of various materials that can be joined or cut ○ The deployment, co-ordination and selection of computer-aided design, computer numerical control, rapid prototyping technology, laser cutting and laser welding ○ The operation of 3-D scanners • Understand thoroughly the design process and know about the points to note when developing new products • Understand intellectual property and do not copy other people's works when using new technology to design jewellery <p>2. Apply new technology to carry out innovative jewellery design</p> <ul style="list-style-type: none"> • Apply in-depth expertise in innovative technology to carry out innovative jewellery design and produce prototypes for the next production process, so as to enhance the quality and market value of the design and finished products <p>3. Professionalism</p> <ul style="list-style-type: none"> • Respect intellectual property and avoid plagiarism, preventing individuals and the organization from falling into the trap of infringement of intellectual property rights

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Assessment Criteria	The integrated outcome requirement of this unit of competency is: <ul style="list-style-type: none">• Able to master the knowledge and operation of the new technology for jewellery manufacturing/production, and conduct research and development of innovative jewellery design, so as to enhance the quality and market value of the design or products.
Remark	