

Specification of Competency Standards
for the Jewellery Industry
Unit of Competency

Functional Area - Production

Title	Master the techniques for carving semi-precious gemstones/coloured gemstones
Code	108955L3
Range	This unit of competency is applicable to practitioners working in the gemstone faceting/polishing/carving department of jewellery manufacturing organizations. Practitioners should be capable of making judgments and understanding the characteristics of semi-precious gemstones/coloured gemstones. They should be able to apply various gemstone carving tools and equipment to carve gemstones according to the instructions of the organization or the orders of the customers after careful analysis and assessment.
Level	3
Credit	9
Competency	<p>Performance Requirements</p> <p>1. Know about semi-precious gemstone/coloured gemstone carving</p> <ul style="list-style-type: none"> • Know about the common semi-precious gemstone/coloured gemstone materials used for carving and their physical properties, such as: <ul style="list-style-type: none"> ○ Chalcedony ○ Agate ○ Lapis lazuli ○ Turquoise ○ Malachite ○ Dushan jade ○ Serpentine ○ Rhodonite ○ Natural glass ○ Stones for making stamps, such as: <ul style="list-style-type: none"> ▪ Shoushan stone (Pagodite (Larderite)) ▪ Qingtian stone ▪ Jixue stone (Oriental jasper) ▪ Changhua stone ▪ Balin stone ○ Ink stone ○ Coral ○ Amber ○ Shell • Know about the basic forms of semi-precious gemstone/coloured gemstone carving, including motifs/ornaments, stamps, characters, figurines, landscapes, flowers/leaves, fishes/beasts, etc. • Understand the functions, operation and safe operation of tools/equipment for carving semi-precious gemstones/coloured gemstones • Understand the procedures for carving semi-precious gemstones/coloured gemstones • Know about the new technical knowledge related to semi-precious gemstone/coloured gemstone carving, such as: <ul style="list-style-type: none"> ○ Ultrasonic jade/gemstone carving machine ○ CNC (computer numerical control) laser cutting machine ○ CNC milling machine <p>2. Master the techniques for carving semi-precious gemstones/coloured gemstones</p> <ul style="list-style-type: none"> • Master the use of equipment for carving semi-precious gemstones/coloured gemstones

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	<ul style="list-style-type: none"> • Master the procedures and techniques for carving semi-precious gemstones/coloured gemstones, including: <ul style="list-style-type: none"> ○ Material selection ○ Separation ○ Drawing sketches ○ Carving ○ Polishing ○ Sealing with wax • Master the application of various grinding and polishing materials • Master the way to create a unique style <p>3. Professionalism</p> <ul style="list-style-type: none"> • Following the requirements of the organization, code of practice and safety guidelines, carve semi-precious gemstones/coloured gemstones with the proper and safe use of various faceting/polishing/carving tools and equipment with a professional attitude
Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are:</p> <ul style="list-style-type: none"> • Able to use various gemstone carving tools and equipment safely to carve and polish semi-precious gemstone/coloured gemstone materials according to the instructions of the organization or the orders of the customers, including motifs and ornaments; and • Take into account the quality, texture, and optical and physical properties of stone materials to meet the requirements of the 3-D designs.
Remark	<p>This unit of competency is written with reference to the following materials. Readers can study the relevant information according to their needs:-</p> <ul style="list-style-type: none"> • Guobiao standards GB/T16553-2017 (Gems Testing); • The English-Chinese and Chinese-English Dictionary of Gems and Jewelry by China University of Geosciences Press Co. Ltd.; and • Practical Gem Processing Techniques (實用寶石加工技法) by Chemical Industry Press Co. Ltd.