

Specification of Competency Standards
for the Jewellery Industry
Unit of Competency

Functional Area - Production

Title	Master the techniques for cutting/polishing faceted gemstones
Code	108946L2
Range	This unit of competency is applicable to practitioners working in the faceted gemstone cutting/polishing department of jewellery manufacturing organizations. Practitioners should be capable of operating various cutting/polishing tools and equipment under instruction to perform basic precision faceted gemstone cutting/polishing work.
Level	2
Credit	6
Competency	<p>Performance Requirements</p> <p>1. Know about the operation of basic tools and equipment for cutting/polishing faceted gemstones and the relevant occupational safety</p> <ul style="list-style-type: none"> • Know about the basic optical and physical properties of faceted gemstones • Know about the common cuts and facets of faceted gemstones, including: <ul style="list-style-type: none"> ○ Round brilliant ○ Oval ○ Marquise ○ Pear ○ Square/baguette ○ Trapeze ○ Emerald ○ Scissors ○ Mixed cuts • Know about the industrial safety of cutting/polishing faceted gemstones <ul style="list-style-type: none"> ○ Know about the protection of the respiratory system ○ Know about the causes and prevention of silicosis ○ Pay attention to potential hazards in the work processes and working environment ○ Formulate and list the safety regulations appropriately and clearly • Know about the functions, operation and safe operation of the tools/equipment for cutting/polishing faceted gemstones, including: <ul style="list-style-type: none"> ○ Precision diamond cutting machine ○ Girdle polishing machine ○ Cutting lap ○ Polishing wheel <ul style="list-style-type: none"> ▪ Tin wheel ▪ Tin/lead alloy wheel ▪ Aluminium alloy wheel ▪ Resin wheel ▪ Tar wheel ○ Emerald hand faceting grinder holder ○ Transfer jig/Dop stick • Know about the basic procedures for cutting/polishing faceted gemstones, including: <ul style="list-style-type: none"> ○ Separating ○ Marking ○ Mould trimming ○ Attaching to the dop stick ○ Prototyping ○ Faceting and polishing

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	<ul style="list-style-type: none"> ▪ Crown facet blocking ▪ Crown facet polishing ▪ Reversing the gemstone ▪ Removing the dopping compound and cleaning ▪ Pavilion facet blocking ▪ Pavilion facet polishing ▪ Removing the dopping compound and cleaning <p>2. Master the techniques for cutting/polishing faceted gemstones</p> <ul style="list-style-type: none"> • Master the use of basic equipment for cutting/polishing faceted gemstones • Master various polishing methods and the application of polishing materials, including: <ul style="list-style-type: none"> ○ Polishing agent <ul style="list-style-type: none"> ▪ Diamond powder abrasive ▪ Corundum powder ▪ Tin oxide powder ▪ Chromium oxide powder ▪ Iron oxide powder ▪ Zinc oxide powder ○ Liquid polishing compound <p>3. Professionalism</p> <ul style="list-style-type: none"> • Following the requirements of the organization, code of practice and safety guidelines, cut/polish faceted gemstones by using various relevant tools and equipment properly and safely with a professional attitude
Assessment Criteria	<p>The integrated outcome requirement of this unit of competency is:</p> <ul style="list-style-type: none"> • Able to use various gemstone cutting/polishing tools and equipment safely, and master basic techniques for cutting/polishing basic faceted gemstones under instruction.
Remark	<p>This unit of competency is written with reference to the Jewelry Professional Planning Material "Gem Processing Techniques" (珠寶首飾類專業規劃教材《寶石加工工藝學》) by China University of Geosciences Press Co. Ltd.</p>