



National Vocational Certificate level 3, in
(Gems & Jewellery Sector)

GEMOLOGY



National Vocational and Technical Training Commission (NAVTTTC)
Government of Pakistan

Quality Assessed by:

Mr. Muqeem-ul-Islam

Director General (Skills, Standards and Curricula)
NAVTTTC, Islamabad

Mr. Muhammad Naeem Akhtar

Senior Technical Advisor (QA)
TVET Sector Support Programme, Islamabad.

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**National Vocational Certificate level 3, in
(Gems & Jewellery Sector)
“GEMOLOGY”**

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TITLE OF QUALIFICATION

National Vocational Certificate level 3, in (Gems and Jewellery Sector) “Gemology“

INTRODUCTION

Gemology is the science dealing with natural and artificial gemstone material. It is considered a geo-science & a branch of mineralogy.

Initially education in gemology for jewelers and gemologist started in early nineteenth century. The National Association of Gold Smiths of UK (NAG) form a gemological committee in 1908 for accreditation of first qualification in Gemology. Later, this committee was restructured into the gemological association of the Great Britain (GEM-A). Now a days this association is working as an education charity and accredited awarding body of gemology with its curriculum followed worldwide.

This course of gemology enables the trainee to identify, categorize and evaluate the raw or polished gemstone. The trainee will be able to differentiate between natural and synthetic gemstone by using different gemological laboratory equipment for example gemological microscope spectrometer etc.

A gemstone can be identified on the basis of physical and optical properties. This course is designed to provide a comprehensive introduction to gemology and will increase job opportunities for the trainees; they can work as a Gemologist in industry or as self-employed. After completion of the course the trainees will not only be able to identify, evaluate and grade the gemstones using international standard equipment but also provide an opportunity to facilitate the local Gems & Jewellery sector of Pakistan.

Industry experts from the relevant industries from different geographical locations across Pakistan were consulted during the development process of these competency standards to ensure input and ownership of all the stakeholders. NAVTTC approves these competency standards on the recommendation of Industry Advisory Group (IAG) for the Gems and Jewelry sector.

The National Competency Standards could be used as a referral document for the development of curricula to be used by training institutions.

Training in the course is based on defined competency standards, which are industry oriented and the traditional role of a trainer changes and shifts towards the facilitation to trainees. A trainer encourages and assists trainees to learn for themselves. Trainees are likely to work in groups (pairs) and all doing something different. Some are doing practical tasks in the workshop, some writing, some not even in the classroom or workshop but in another part of the building using specialist equipment, working on computers doing research on the Internet or the library. As trainees learn at different pace they might well be at different stages in their learning, thus learning

must be tailored to suit individual needs. The following facilitation methods (teaching strategies) are generally employed:

- **Direct Instruction Method:** This might be effective when introducing a new topic to a larger group of trainees in a relative short amount of time. In most cases this method relies on one-way communication, hence there are limited opportunities to get feedback on the trainee's understanding.
- **Discussion Method:** This allows trainees to actively participate in sharing knowledge and ideas. It will help the trainer to determine whether trainees understand the content of the topic. On the other hand, there is a possibility of straying off topic under discussion and some trainees dominating others on their views.
- **Small Group Method:** Pairing trainees to help and learn from each other often results in faster knowledge/skill transfer than with the whole class. The physical arrangement of the classroom/workshop and individual assessment may be challenging. Analogy method should be in corporate.
- **Problem Solving Method:** This is a very popular teaching strategy for the training. Trainees are challenged and are usually highly motivated when they gain new knowledge and skills by solving problems (Contingency skills). Trainees develop critical thinking skills and the ability to adapt to new learning situations (Transfer skills). It might be time consuming and because trainees sometimes work individually, they may not learn all the things that they are expected to learn.
- **Research Method:** This is used for workshops and laboratory tasks, field experiments, and case studies. It encourages trainees to investigate and find answers for themselves and to critically evaluate information. It however requires a lot of time and careful planning of research projects for the trainee.

The detail of the competency standards included in this qualification are given below:

PURPOSE OF THE QUALIFICATION

The purpose of the training is to provide skilled manpower for the improvement of the existing Gems and Jewellery sector and related industry. This will improve the abilities and accreditation of a gemologist in terms of national and international standards applicable in the field of gemology. The availability of quality gemologists in the local and international markets will ultimately bring economic benefits to the Stakeholders of gems industry.

The core purpose of this qualification is to produce employable Gemologist, who could provide advanced Services of identification grading and valuation of gemstones. In addition this qualification will prepare youth for employment in Gemstone industry or work as an entrepreneur. To prepare and train students through skill training and enabling them to earn their living either through employment in industry or to be self-employed as an gemologist.

MAIN OBJECTIVES OF THE QUALIFICATION

Gemology qualification consists of theoretical and practical details required for the identification, Valuation and grading of precious, semi-precious, and raw or polished gemstone. The main objectives of the qualification are as follows:

1. Assess Physical properties of Gemstone
2. Assess Optical Properties of Gemstone
3. Differentiate between natural, treated, imitation and synthetic gemstone
4. Organic Gemstone
5. Perform color stone grading (Other than Diamond)
6. Perform Diamond Grading

DATE OF VALIDATION

The level 3 of national vocational qualification on Gems and Jewelry Sector – Gemology has been validated by the Qualifications Development Committee (QDC) members on May 2018 and will remain in currency until May 2021.

CODES OF QUALIFICATIONS

The International Standard Classification of Education (ISCED) is a framework for assembling, compiling and analyzing cross-nationally comparable statistics on education and training. ISCED codes for these qualifications are assigned as follows:

ISCED Classification for Gemology	
Code	Description
0214G&J4	National Vocational Certificate level 3 in Gems and Jewellery Sector – Gemology

MEMBERS OF QUALIFICATIONS DEVELOPMENT COMMITTEE

The following members participated in the qualifications development and validation of these qualifications:

Name	Designation	Organization	Email	Contact
Bashir Agha	Principal	GJTMC- Quetta	bashiragha786@gmail.com	03218119120

Name	Designation	Organization	Email	Contact
Khalid Aziz	Ex-General Manager	PGJDC, Karachi	khalidaziz1958@yahoo.com	03002296904
Taj Muhammad	Chairman	TTB- Balochistan	Taj.mdmt@gmail.com	03003829116
Nadeem Ahmed	Manager Trainings	PGJDC, Karachi	nadeembasit@pgjdc.org	03332141192
Farheen Agha	Lapidary In-charge	GJTMC-Quetta	farheenagha@pgjdc.org	0812837268
M. Touqir Ali	Lapidary In-charge	GJTMC-AJK	touqir@pgjdc.org	03329192551
Tausif Ahmed	Instructor	GJTMC-Lahore	tausifjan@hotmail.com	03216601612
Muhammad Shoaib	Instructor	GJTMC-Lahore	shoaib@pgjdc.org	03214150608
Muhammad Arif	Instructor gemstone faceting	GJTMC-Quetta	marifgems@gmail.com	03338837772
Muhammad Naseem	Instructor-Gemstone Caving	GJTMC-Quetta	m.naseembarech@gmail.com	03368110565
Faeza Siddiqui	Assist. Mgr Trainings	PGJDC, Karachi	faeza@pgjdc.org	03002702933
Syed Saifullah	CEO	Businessman G&J sector	Ssaif_brothers@yahoo.com	03008381061
Jalil Ahmed	Lecturer	Geology Deptt. UoB	Jalil.barech182@gmail.com	03327818733
M. Naeem Akhtar	Sr. Tech Advisor	GIZ, TU	muhammad.akhtar@giz.de	03009438051
Arslan Javed	MA	GIZ	arsalan.javed@giz.de	03335164833
Ghulam Hussain Raza	DACUM Facilitator	B-TVETA, Quetta	Grhussain70@gmail.com	03332064233
S-Sabhai	Tech. Advisor	GIZ/EU	Syed.shah@giz.de	03005957954
Akhtar Khan	Marketing & Job placement	GJTMC, Quetta	akhtarsargarh@gmail.com	03138353410
Muhammad Ishaq	Proprietor	Universal Gems & Jewellery, Qta	micronzasallu@yahoo.com	03218040814

Name	Designation	Organization	Email	Contact
Salman Khan	Instructor Gemology	GJTMC-Quetta	Salmanshai121@gmail.com	03138821117
Imran Zafar	Principal	GJTMC, AJK	Imran.zafar@pgjdc.org	03359393266
Hafeezullah	TA-TF, Balochistan	GIZ	Hafeez.jogezai@giz.de	030-8659520
Muhammad Saleem	CEO	Chaghi Gems	Chaghigems786@gmail.com	03333787771

ENTRY REQUIREMENTS

The entry for National Vocational Certificate level 3, in (Gems and Jewellery Sector) “Gemology” is given below:

Entry for assessment for this qualification is open. However, entry into formal training institutes, based on this qualification may require skills and knowledge equivalent to Matric (Grade 10).

SUMMARY OF COMPETENCY STANDARDS

Code	Competency Standards	Level	Credits	Category
0214G&J4A	Assess Physical properties of Gemstone	3	10	Functional
0214G&J4B	Assess Optical Properties of Gemstone	3	18	Technical
0214G&J4C	Differentiate between natural, treated, imitation and synthetic gemstone	3	20	Technical
0214G&J4D	Organic Gemstone	3	8	Functional
0214G&J4E	Perform color stone grading (Other than Diamond)	3	12	Functional
0214G&J4F	Perform Diamond Grading	3	12	Functional
041600453	Occupational health and safety	2	3	Technical
041600455	Communicate in the workplace to support customers and team	3	6	Technical

Code	Competency Standards	Level	Credits	Category
041600459	Work effectively in a customer service - sales environment	3	7	Technical
041600460	Develop professionalism	3	3	Technical
041600461	Comply with health and safety regulations	3	2	Technical

Competency Standard A: Assess physical properties of gemstone

Overview

This competency standard covers the skills and knowledge required to Identify Gemstones by observing physical properties of gemstones through conducting physical tests on gemstones

Competency Units	Performance Criteria	Knowledge & Understanding
A1: Assess color of stone	Trainee will be able to: P1. Assess body color of stone P2. Assess tone of stone P3. Assess saturation of the gemstone P4. Assess Hue of the gemstone	Trainee will be able to know: K1. Definition and causes of color in gemstones, K2. Idiochromatic / Allochromatic gemstones. K3. Understanding of Hue, Tone and Saturation K4. Physical Properties of various gemstone
A2: Assess cut of Gemstone	Trainee will be able to: P1. Check cutting style of the stone P2. Check the symmetry of the cut P3. Identify the cutting defects in the given gemstone	Trainee will be able to know: K1. Shapes and Types of cut K2. Understanding of symmetry, proportion and polish of gemstone
A3: Assess transparency of gemstone	Trainee will be able to: P1. Check the stone transparency type: <ul style="list-style-type: none"> - Transparent - Translucent - Opaque 	Trainee will be able to know: K1. Nature and behavior of light and various definition related to transparency

Competency Units	Performance Criteria	Knowledge & Understanding
	P2. Record the transparency types	
A4: Assess crystal system	<p>Trainee will be able to:</p> <p>P1. Check the crystal system of the gemstone with the help of dummy samples</p> <p>P2. Record the crystal system</p>	<p>Trainee will be able to know:</p> <p>K1. Basic Crystallography and description of various crystal systems</p>
A5: Perform Hardness test	<p>Trainee will be able to:</p> <p>P1. Collect Hardness tools</p> <p>P2. Apply hardness test on gemstone</p> <p>P3. Record the value of hardness</p>	<p>Trainee will be able to know:</p> <p>K1. Definition of hardness,</p> <p>K2. Mohs hardness scale</p> <p>K3. Methods of Gemstone hardness testing</p>
A6: Perform specific gravity test with Hydrostatic balance	<p>Trainee will be able to:</p> <p>P1. Collect Hydrostatic balance and stone</p> <p>P2. Adjust the Hydrostatic balance</p> <p>P3. Weigh the stone in air</p> <p>P4. Weigh the stone in water</p> <p>P5. Calculate specific gravity of the stone</p>	<p>Trainee will be able to know:</p> <p>K1. Definition of Specific Gravity</p> <p>K2. Construction and uses of Hydrostatic balance</p> <p>K3. Calculating Specific Gravity of gemstones</p>
A6: Perform specific gravity test	<p>Trainee will be able to:</p> <p>P1. Arrange heavy liquids</p>	<p>Trainee will be able to know:</p>

Competency Units	Performance Criteria	Knowledge & Understanding
by heavy liquids	<p>P2. Perform test by using various heavy liquids</p> <p>P3. Record specific gravity of the gemstone</p>	<p>K1. Different types of heavy liquids</p> <p>K2. Specific gravity through heavy liquids</p>
A7: Assess cleavage of Gemstone	<p>Trainee will be able to:</p> <p>P1. Observe the cleavage with the help of 10 X Loupe</p> <p>P2. Record the cleavage</p>	<p>Trainee will be able to know:</p> <p>K1. Definition and explanation of different types of Cleavage in gemstone.</p> <p>K2. Different directions of cleavages</p>
A8: Assess clarity of Gemstone	<p>Trainee will be able to:</p> <p>P1. Assess the type of clarity with the help of 10 X Loupe</p> <p>P2. Record the inclusion position and relief</p>	<p>Trainee will be able to know:</p> <p>K1. Definition and explanation of different grades of Clarity in gemstone.</p>

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Note the Body color of Gemstone
- Type of Cut
- Transparency of gemstone
- Crystal System
- Hardness of gemstone comparing with moh's scale of Hardness
- Specific Gravity of Gemstone
- Observe the Clarity of Gemstone through loupe

Tools and equipment required

- Light source
- Hardness Pencils
- Hydrostatic Balance
- Heavy Liquids
- Loupe(10x)
- Crystal Models
- Tweezers
- Samples of rough & cut gemstone

Competency Standard B: Assess optical properties of gemstone

Overview

This competency standard covers the skills and knowledge required to Identify Gemstones by observing Optical properties of these gemstones through conducting Optical tests on gemstones

Competency Units	Performance Criteria	Knowledge & Understanding
B1: Assess Gemstone with light source	<i>Trainee will be able to:</i> P1. Collect inspection lamp P2. Observe the brilliancy under lamp P3. Note the category of brilliance Note the dispersion rate in the gemstone	<i>Trainee will be able to know:</i> <i>K1.</i> Definition and explanation of Brilliancy, Dispersion, Luster <i>K2.</i> Optical Properties of various gemstones <i>K3.</i> Origin and Occurrences of various Gemstones
B2: Assess Phenomenon in Gemstone	<i>Trainee will be able to:</i> P1. Collect inspection lamp P2. Observe the phenomenon in gemstone P3. Identify the phenomenon	<i>Trainee will be able to know:</i> <i>K1.</i> Definition and explanation of various Phenomenon in gemstone
B3: Perform polarization test	<i>Trainee will be able to:</i> P1. Collect Polaris cope P2. Adjust the analyzer and polarizer P3. Decide about single refractive, double refractive and aggregate	<i>Trainee will be able to know:</i> <i>K1.</i> Definition and explanation of Polarized light <i>K2.</i> construction and usage of Polariscope in identification of gemstone

Competency Units	Performance Criteria	Knowledge & Understanding
B4:Perform pleochroism test	<p>Trainee will be able to:</p> <p>P1. Arrange dichroscope and light source to check pleochroism in gemstone</p> <p>P2. Adjust light and dichroscope</p> <p>P3. Observe the gemstone for dichroism</p> <p>P4. Note the Pleochroic color</p>	<p>Trainee will be able to know:</p> <p>K1. Definition of Pleochroism, dichroism and trichroism,</p> <p>K2. Construction and usage of dichroscope</p>
B5: Assess refractive index of Gemstone	<p>Trainee will be able to:</p> <p>P1. Arrange the refractometer and refractive index liquid</p> <p>P2. Apply liquid on hemi-cylinder</p> <p>P3. Place stone properly on hemi cylinder</p> <p>P4. Note the SR, DR or ADR and readings</p> <p>P5. Calculate birefringence of the gemstone</p>	<p>Trainee will be able to know:</p> <p>K1. Definition and explanation of Refractive Index and its table.</p> <p>K2. Construction and usage of refractometer.</p> <p>K3. Refractive indices of various gemstones</p> <p>K4. Calculating method birefringence of the gemstone</p> <p>K5. SR, DR or ADR</p>

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Note Brilliancy and Dispersion
- Observe and Note various Phenomenon
- Understand usage of Polari scope and separate gemstone on its bases
- Understand usage of Dichroscope and observe pleochroism
- Understand usage of Refractometer and observe Refractive Indices



Tools and equipment required

- Light source
- Polariscope
- Dichroscope
- Refractometer
- Refractive index Fluid
- Tweezers
- Loupe
- Gemstone sample

Competency Standard C: Differentiate between natural, treated, imitation and synthetic gemstone

Overview

This competency standard covers the skills and knowledge required to Identify and differentiates Natural, Synthetic and Imitation gemstones by observing various Physical and Optical properties of these gemstones through conducting various physical and Optical tests on gemstones.

Competency Units	Performance Criteria	Knowledge & Understanding
C1: Identification of natural gemstone on the basis of inclusion	<p>Trainee will be able to:</p> <p>P1. Arrange Gemological microscope and equipment</p> <p>P2. Adjust Gemological microscope</p> <p>P3. Observe the natural inclusions under different lighting techniques:</p> <ul style="list-style-type: none"> - Bright field - Dark field - Reflected light - Diffused light <p>P4. Plot a sketch as per observations</p> <p>Note: Tally observed inclusions with reference book (Photo Atlas)</p>	<p>Trainee will be able to know:</p> <p>K1. Construction and usage of microscope</p> <p>K2. Types, explanation and identification of different inclusions</p>
C2: Identify treated gemstone on the basis of inclusion	<p>Trainee will be able to:</p> <p>P1. Arrange Gemological microscope and equipment</p> <p>P2. Adjust Gemological microscope</p> <p>P3. Observe the treated inclusions under different lighting techniques:</p> <ul style="list-style-type: none"> - Bright field - Dark field 	<p>Trainee will be able to know:</p> <p>K1. Explanation of various types of treatments on gemstone.</p> <p>K2. Effects of treatment on gemstone</p>

Competency Units	Performance Criteria	Knowledge & Understanding
	<ul style="list-style-type: none"> - Reflected light - Diffused light <p>P4. Plot a sketch as per observations</p> <p>Note: Tally observed inclusions with reference book (Photo Atlas)</p>	<p>K3. Methods of identification of treated gemstones</p>
<p>C3: Identify imitation/assembled Gemstones on the basis of inclusion</p>	<p>Trainee will be able to:</p> <p>P1. Arrange Gemological microscope and equipment</p> <p>P2. Adjust Gemological microscope</p> <p>P3. Observe the imitation inclusions under different lighting techniques:</p> <ul style="list-style-type: none"> - Bright field - Dark field - Reflected light - Diffused light <p>P4. Plot a sketch as per observations</p> <p>Note: Tally observed inclusions with reference book (Photo Atlas)</p>	<p>Trainee will be able to know:</p> <p>K1. Definition and types of Imitation gemstone,</p> <p>K2. Methods of their production</p> <p>K3. Techniques to identify Imitations through microscope.</p>
<p>C4: Identify synthetic gemstone on the basis of inclusions</p>	<p>Trainee will be able to:</p> <p>P1. Arrange Gemological microscope and equipment</p> <p>P2. Adjust Gemological microscope</p> <p>P3. Observe the different types of synthetic inclusions under different lighting techniques:</p> <ul style="list-style-type: none"> - Bright field - Dark field - Reflected light 	<p>Trainee will be able to know:</p> <p>K1. Definition and explanation of Synthetic Gemstone.</p> <p>K2. Methods of production of synthetic gemstone</p> <p>K3. Properties and types of inclusions in synthetic gemstone.</p>

- Diffused light

P4. Plot a sketch as per observations

Note: Tally observed inclusions with reference book (Photo Atlas)

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- To identify natural gemstones
- To identify Treated gemstones
- To identify Imitation/ assembled gemstones
- To identify Synthetic gemstones

Tools and equipment required

- Microscope
- Tweezers
- Gemstone samples

Competency Standard D: Organic gemstones

Overview

This competency standard covers the skills and knowledge required to Identify various Organic gemstones and their Imitation by observing various Physical and Optical properties of these Organic gemstones through conducting various physical and Optical tests on Organic gemstones.

Competency Units	Performance Criteria	Knowledge & Understanding
D1: Identify Pearl	<p><i>Trainee will be able to:</i></p> <p>P1. Observe color and tone of pearl</p> <p>P2. Observe luster of Pearl</p> <p>P3. Observe Shape and surface of Pearl</p> <p>P4. Observe size and measurement of pearl</p> <p>P5. Perform Grading of Pearl</p> <p>P6. Understand different types of Pearls</p> <p>P7. Understand Imitation Pearl</p>	<p><i>Trainee will be able to know:</i></p> <p>K1.Defination and Explanation of Pearl</p> <p>K2.Physical and Optical Properties of Pearl</p> <p>K3. Process of Pearl Cultivation</p> <p>K4. Origin and locations of Natural and cultured Pearls</p> <p>K5.Types of Pearls</p> <p>K6. Different Imitation of Pearls</p> <p>K7.Parameters of Pearl grading</p>
D2: Identify Coral	<p><i>Trainee will be able to:</i></p> <p>P1. Observe color and tone of Coral</p>	<p><i>Trainee will be able to know:</i></p>

Competency Units	Performance Criteria	Knowledge & Understanding
	<p>P2. Observe luster of Coral</p> <p>P3. Observe Shape and cut of Coral</p> <p>P4. Understand Imitation Coral</p> <p>P5. Perform Grading of Coral</p>	<p>K1.Defination and Explanation of Coral</p> <p>K2.Physical and Optical Properties of Coral</p> <p>K3. Formation and Occurrence of Coral</p> <p>K4.Parameters of Coral grading</p> <p>K5.Different Imitation of Corals</p>
D3: Identify Amber	<p>Trainee will be able to:</p> <p>P1. Observe color and tone of Amber</p> <p>P2. Observe luster of Amber</p> <p>P3. Observe Shape and cut of Amber</p> <p>P4. Understand different types of Amber</p> <p>P5.Understand Imitation of Amber</p> <p>P5. Perform Grading of Amber</p>	<p>Trainee will be able to know:</p> <p>K1.Defination and Explanation of Amber</p> <p>K2.Physical and Optical Properties of Amber</p> <p>K2. Formation and Occurrence of Amber</p> <p>K3.Parameters of Amber grading</p> <p>K4.Different Imitation of Amber</p>
D.4 Identify other Organic gemstones	<p>Trainee will be able to:</p> <p>P1. Observe color and tone of Organic gemstone</p> <p>P2. Observe luster of Organic gemstone</p>	<p>Trainee will be able to know:</p> <p>K1.Defination, Explanation, Origin and Occurrence of Ivory</p>

Competency Units	Performance Criteria	Knowledge & Understanding
	<p>P3. Observe Shape and cut of Organic gemstone</p> <p>P4. Understand Ivory and its Imitation</p> <p>P5. Understand Jet and its Imitation</p> <p>P6. Understand Bones, Crocodile shell and fossils</p>	<p>K1. <i>Physical and Optical Properties of Ivory</i></p> <p>K2. <i>Defination, Explanation, Origin and Occurrence of Jet</i></p> <p>K3. <i>Physical and Optical Properties of Jet</i></p> <p>K4. <i>Defination, Explanation, Origin and Occurrence of Bones, crocodile shell and fossils.</i></p> <p>K5. <i>Physical and Optical Properties of Bones, crocodile shell and fossils</i></p> <p>K6. <i>Parameters of Bones, crocodile shell and fossils</i></p> <p>K7. <i>Different Imitation of Bones, crocodile shell and fossils</i></p>
D4: Identify Cut	<p>Trainee will be able to:</p> <p>P1. Arrange 10X loupe and tweezers</p> <p>P2. Observe the cutting style</p> <p>P3. Check polish quality of the gemstone</p> <p>P4. Record the cut grade</p>	<p>Trainee will be able to know:</p> <p>K1. <i>Various types of gemstone shapes</i></p> <p>K2. <i>Various cut of gemstone.</i></p> <p>K3. <i>Symmetry and polish of gemstone.</i></p>
D5: Perform weight	Trainee will be able to:	Trainee will be able to know:

Competency Units	Performance Criteria	Knowledge Understanding &
	P1. Arrange weighing balance and tweezers	K1. <i>Definition and explanation of weighing units.</i>
	P2. Adjust weighing balance	K2. <i>Importance of weight in grading</i>
	P3. Take weight	
	P4. Record the weight	

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Identify and Grade Pearl.
- Identify and Grade Coral
- Identify and Grade Amber
- Identify and Grade Other Organic Gemstones

Tools and equipment required

- Tweezers
- Loupe
- Light source
- Polariscopes
- Refractometer
- Microscope
- Weighing Balance
- Gemstone (Pearl, Coral, Amber)

Competency Standard E: Perform color stone grading (Other than Diamond)

Overview

This competency standard covers the skills and knowledge required to Grade various gemstones by observing Color, Clarity, Cut and Carat Weight

Competency Units	Performance Criteria	Knowledge & Understanding
D1: Perform Color grading	<p><i>Trainee will be able to:</i></p> <p>P1. Observe gemstone under light source and examine the:</p> <p>P2. Judge the basic color of Gemstone</p> <p>P3. Judge the tone of Gemstone</p> <p>P4. Observe the saturation of color in gemstone</p> <p>P5. Record the gemstone color</p>	<p><i>Trainee will be able to know:</i></p> <p><i>K1.</i> Definition and explanation of Grading of gemstone.</p> <p><i>K2.</i> Definition of Hue, tone and saturation</p>
D2: Perform Clarity grading	<p><i>Trainee will be able to:</i></p> <p>P1. Arrange 10X loupe and tweezers</p> <p>P2. Observe the inclusion on the basis of:</p> <ul style="list-style-type: none"> - Size - Position - Relief 	<p><i>Trainee will be able to know:</i></p> <p><i>K1.</i> Definition of Clarity</p> <p><i>K2.</i> Position and relief of inclusion in gemstone</p>

Competency Units	Performance Criteria	Knowledge & Understanding
	<p>P3. Record the clarity type</p>	<p>K3. grading of gemstone as per clarity</p>
<p>D3: Perform Cut grading</p>	<p>Trainee will be able to:</p> <p>P1. Arrange 10X loupe and tweezers</p> <p>P2. Observe the cutting style</p> <p>P3. Observe the cut symmetry</p> <p>P4. Observe proportion</p> <p>P5. Check facets</p> <p>P6. Check polish quality of the gemstone</p> <p>P7. Check blemishes</p> <p>P8. Record the cut grade</p>	<p>Trainee will be able to know:</p> <p>K1. Various types of gemstone shapes</p> <p>K2. Various cut of gemstone.</p> <p>K3. Symmetry, blemishes, proportion and polish of gemstone.</p>
<p>D4: Perform weight grading</p>	<p>Trainee will be able to:</p> <p>P1. Arrange weighing balance and tweezers</p> <p>P2. Adjust weighing balance</p> <p>P3. Take weight in carats</p> <p>P4. Record the carat weight</p>	<p>Trainee will be able to know:</p> <p>K1. Definition and explanation of weighing units.</p> <p>K2. Importance of weight in grading</p>

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- To grade the gemstone

Tools and equipment required

- Tweezers
- Loupe
- Light source
- Weighing balance
- Gemstone sample

Competency Standard F: Perform Diamond grading

Overview

This competency standard covers the skills and knowledge required to Grade Diamond by observing Color, Clarity, Cut and Carat Weight

Competency Units	Performance Criteria	Knowledge & Understanding
E1: Perform Color grading	<p><i>Trainee will be able to:</i></p> <p>P1. Observe Diamond under day light source</p> <p>P2. Compare it with a master samples according to the international standard.</p> <p>P3. observe color in Diamond according to the international standard</p> <p>P4. Record the color grade</p>	<p><i>Trainee will be able to know:</i></p> <p>K1. Definition and explanation of color grading of Diamond.</p> <p>K2. Methods and tools used in grading color of diamond.</p>
E2: Perform Clarity grading	<p><i>Trainee will be able to:</i></p> <p>P1. Arrange 10X loupe and tweezers</p> <p>P2. Observe the inclusion on the basis of :</p> <p>Size</p> <p>Position</p> <p>Relief</p> <p>P3. Record the clarity type (Grade the clarity as per result)</p>	<p><i>Trainee will be able to know:</i></p> <p>K1. Definition and explanation of Clarity of Diamond.</p> <p>K2. Methods and tools used in Diamond grading.</p> <p>K3. Types of Inclusions and Blemishes.</p> <p>K4. Explanation of various Grades of Diamonds</p>

Competency Units	Performance Criteria	Knowledge & Understanding
E3: Perform Cut grading	<p><i>Trainee will be able to:</i></p> <p>P1. Arrange 10X loupe and light source and tweezers</p> <p>P2. Observe the cutting style</p> <p>P3. Observe the cut symmetry</p> <p>P4. Observe girdle thickness</p> <p>P5. Estimate culet size</p> <p>P6. Estimate table percentage</p> <p>P7. Estimate Crown percentage</p> <p>P8. Estimate pavilion depth</p> <p>P9. Grade the proportion</p> <p>P10. Check facets</p> <p>P11. Check polish quality</p> <p>P12. Check blemishes</p> <p>P13. Record the cut grade according to the international standard</p>	<p><i>Trainee will be able to know:</i></p> <p><i>K1.</i> Definition and Explanation of various shapes and cuts in Diamond.</p> <p><i>K2.</i> Description of Proportion, Symmetry and polish,</p> <p><i>K3.</i> Explanation of cut grading as per international standard.</p> <p><i>K4.</i> Usage of different instrument for cut grade</p>
E4: Perform weight grading	<p><i>Trainee will be able to:</i></p> <p>P1. Arrange weighing balance and tweezers</p> <p>P2. Take weight in carat</p> <p>P3. Record the carat weight</p>	<p><i>Trainee will be able to know:</i></p> <p><i>K1.</i> Definition and explanation of weighing unit.</p> <p><i>K2.</i> Estimation of Diamond weight through measurements.</p>

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Color Grade Diamond
- Clarity Grade
- Cut Grade
- Carat weight of Diamond

Tools and equipment required

- Tweezers
- Loupe
- Microscope
- Weighing balance
- Master Color samples

Occupational health and safety

Purpose

It is for the safety of persons working in that environment.

Classification ISCED

0416 Wholesale and retail sales

Available grade

Competent / Not yet competent

Modification history

N/A

Unit of Competency	Performance Criteria	Knowledge
I1. Identify and implement safe working practices	You must be able to: P1. Study of facility layout design and operations P2. Implement the health and safety measures	You must know and understand: K1. Knowledge of health and safety precautions

Communicate in the workplace to support customers and team

Purpose

This Competency standard identifies the competencies required to communicate in the workplace to support customers and team as per organization's approved guidelines and procedures. You will be expected to communicate face-to-face with customers, use technology to communicate with customers, communicate with customers and colleagues from diverse backgrounds, work in a team, ask appropriate probing / questioning from customers and provide continuous feedback to customers / colleagues. Your underpinning knowledge about basic communication tools and correspondence tactics will be sufficient for you to provide the basics of the work.

Classification ISCED

Available grade

Competent / Not yet competent

Modification history

N/A

Unit of Competency	Performance Criteria	Knowledge
B1. Communicate face-to-face with customers.	You must be able to: P1. Maintain welcoming customer environment that reflects company branding and market position and is in line with the company policy and procedures. P2. Greet customer warmly according to company policy and procedures. P3. Create effective service environment through verbal	You must be able to: K1. Explain different techniques that can be applied when communicate with customer face to face K2. Describe types of customer behavior and dealings K3. Explain different communication skills and techniques K4. Explain the basic key elements of the

Unit of Competency	Performance Criteria	Knowledge
	<p>and non-verbal interaction according to company policy and procedures.</p> <p>P4. Use questioning and active listening to determine customer needs.</p> <p>P5. Use positive and inclusive language.</p> <p>P6. Recognize personal factors impact on customer service delivery</p>	<p>communication process.</p> <p>K5. Describe a range of communication methods that can be used to effectively communicate with customers and identify the most appropriate to use in different situations.</p> <p>K6. Explain how 'body language' impacts on the communication process.</p>
<p>B2. Use technology to communicate with customers.</p>	<p>You must be able to:</p> <p>P1. Answer telephone according to the company procedures.</p> <p>P2. Questioning and active listening to identify caller and establish and confirm requirements.</p> <p>P3. Use telephone system functions according to instructions.</p> <p>P4. Use email, social networking sites and other technologies to receive and process information and customer requests in line with company policy and procedures.</p> <p>P5. Record and promptly pass on messages or information.</p> <p>P6. Inform customer of any problems and relevant action being taken.</p> <p>P7. Perform follow-up action as necessary.</p>	<p>You must be able to:</p> <p>K1. Identify the recognized principles of communicating electronically, by telephone and in writing.</p> <p>K2. Describe the different methods of collecting customer feedback on telephone.</p> <p>K3. Explain the importance of collecting customer feedback and how this can be used to improve customer service.</p> <p>K4. Describe how technology can affect and enhance the service delivery process.</p>
<p>B3. Communicate with customers and colleagues from diverse backgrounds.</p>	<p>You must be able to:</p> <p>P1. Treat customers and colleagues from diverse backgrounds with respect and sensitivity.</p> <p>P2. Consider cultural differences in verbal and non-verbal communication.</p>	<p>You must be able to:</p> <p>K1. Identify the barriers to effective communication that can arise and how best to deal with these.</p> <p>K2. Identify and explain when it is necessary to seek advice or assistance from colleagues</p>

Unit of Competency	Performance Criteria	Knowledge
	P3. Use gestures or simple words to communicate where language barriers exist. P4. Obtain assistance from colleagues or supervisors when required to facilitate communications.	and when to take own initiative. K3. Describe different types of dealings techniques with different types of behaviors
B4. Work in a team.	You must be able to: P1. Display a courteous and helpful manner at all times. P2. Complete allocated tasks willingly, according to set timeframes. P3. Actively seek or provide assistance by approaching other team members when difficulties arise. P4. Identify and use lines of communication with supervisors and peers according to company policy. P5. Encourage, acknowledge and act upon constructive feedback provided by other team members. P6. Use questioning to minimise misunderstandings. P7. Identify signs of potential workplace conflict wherever possible and take action to resolve the situation using open and respectful communication. P8. Participate in team problem solving. P9. Interpret organization's goals and objectives and translate them into individual targets P10. Prepare plan of action to achieve individual as well as team goals	You must be able to: K1. Define team work. K2. Explain the importance of team work. K3. Define company goals and objectives as well as SOPs of the company K4. Explain different concepts and techniques of problem solving K5. Describe systematic decision making process K6. Describe characteristics of a successful teamwork experience.
B5. Ask appropriate probing / questioning	You must be able to: P1. Use different types of questions when appropriate.	You must be able to: K1. Explain: <ul style="list-style-type: none"> • Open-ended questions

Unit of Competency	Performance Criteria	Knowledge
from customers	P2. Allow the other person to answer freely. P3. Collect facts, information and data about the other person's situation. P4. Focus on the necessary information (information that links directly to product or service)	<ul style="list-style-type: none"> • Close-ended questions • High gain questions • Mirror questions • Probing questions • Situation questions
B6. Provide continuous feed-back	<p>You must be able to:</p> P1. Give and receive feed-back with customers. P2. Apply appropriate body language and read customers body language. P3. Give and receive feed-back with internal departments. P4. Design a communication system / process and share information. P5. Gain commitment from others to work together in the interest of the customers. P6. Conduct meetings. P7. Utilize the feed-back to identify opportunities for product / service improvement.	<p>You must be able to:</p> K1. Explain how to use customer feed-back to improve your business K2. Define importance of body language. K3. Explain communication ethics. K4. Define organizational Jargon.

Work effectively in a customer service/ sales environment

Purpose

This Competency standard identifies the competencies required Work Effectively in a Customer Service/Sales Environment as per Organization's approved guidelines and procedures. You will be expected to work within organizational requirements, support the work team, maintain personal presentation, develop effective work habits, portray ethical behaviour and acquire up to date product / service knowledge. Your underpinning knowledge about Work Effectively in a Customer Service/Sales Environment will be sufficient for you to provide the basics of the work.

Classification ISCED

0416 Wholesale and retail sales

Available grade

Competent / Not yet competent

Modification history

N/A

Unit of Competency	Performance Criteria	Knowledge
F1. Work within organizational requirements.	You must be able to: P1. Identify and read organisation's requirements and responsibilities and seek advice from appropriate people where necessary. P2. Interpret staff rosters and provide sufficient notice of unavailability	You must be able to: K1. Define industry awards and agreements that relate to personal job role and terms and conditions of employment. K2. Differentiate between employer and employee responsibilities. K3. Explain different relevant legislation and statutory requirements.

	<p>for rostered hours according to workplace policy and procedures.</p> <p>P3. Develop and use a current working knowledge and understanding of employee and employer rights and responsibilities.</p> <p>P4. Comply with relevant duty of care and legal responsibilities, and support organisational culture.</p> <p>P5. Identify roles and responsibilities of colleagues and immediate supervisors.</p> <p>P6. Identify standards and values considered to be detrimental to the organisation and communicate this through appropriate channels.</p> <p>P7. Identify, recognise and follow behaviour that contributes to a safe and sustainable work environment.</p>	
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F2.Support the work team.

You must be able to:

- P1. Display courteous and helpful behaviour at all times.
- P2. Take opportunities to enhance the level of assistance offered to colleagues and meet all reasonable requests for assistance within acceptable workplace timeframes.
- P3. Complete allocated tasks as required.

You must be able to:

- K1. Explain the importance of team work
- K2. Define workplace relations
- K3. Explain workplace policies, plans and procedures, including:
 - Dealing with grievances
 - Discriminatory behavior
 - Equal opportunity issues.
 - Staff rosters and notification of shift
 - Availability or non-

- P4. Seek assistance when difficulties arise.
- P5. Use questioning techniques to clarify instructions or responsibilities.
- P6. Identify and display a non-discriminatory attitude in all contacts with customers and other staff members.

- attendance
- Providing customer service to colleagues and customers.

<p>F3. Maintain personal presentation.</p>	<p>You must be able to:</p> <ul style="list-style-type: none"> P1. Observe appropriate dress code and presentation as required by the workplace, job role and level of customer contact. P2. Follow personal hygiene procedures according to organisational policy and relevant legislation. 	<p>You must be able to:</p> <ul style="list-style-type: none"> K1. Explain hygiene and personal presentation K2. Explain the importance of workplace ethics
<p>F4. Develop effective work habits.</p>	<p>You must be able to:</p> <ul style="list-style-type: none"> P1. Interpret, confirm and act on workplace information, instructions and procedures relevant to the particular task. P2. Ask questions to seek and clarify workplace information. P3. Plan and organise daily work routine within the scope of the job role. P4. Prioritise and complete tasks according to required timeframes. P5. Identify work and personal priorities and achieve a balance between competing priorities 	<p>You must be able to:</p> <ul style="list-style-type: none"> K1. Explain staff counseling and disciplinary procedures K2. Describe workplace organizational structure.

F5. Portray ethical behavior	You must be able to: P1. Follow ethical code of conduct. P2. Understand your costumer's code of ethics. P3. Declare conflict of interest. P4. Maintain confidentiality. P5. Honour your commitments (timeframe, deliverables etc.) P6. Use internet for business only on company time.	You must be able to: K1. Explain the importance of ethical behavior. K2. Explain the importance of commitment in sales and customer services.
F6. Acquire up to date product / service knowledge	You must be able to: P1. Gather information about your product / services. P2. Identify the components of your product and services. P3. Recognize the essential selling features of your products and services. P4. Translate all essential features of your product and services. P5. Analyze product success. P6. Identify your market position. P7. Familiar with all product promotions, sales manuals and product literature. P8. Keep information of latest technology advances and seek ways to use these technologies in your work.	You must be able to: K1. Explain: <ul style="list-style-type: none"> • Price per product. • Profit per product / service. • Price flection • Product strengths • Product weaknesses. • Warranty / guarantee policies. • Packaging facilities and potential. K2. Explain how your product/service fits into your customers overall operations, business plan, sales success, operation cost etc.

Develop professionalism

Purpose

This Competency standard identifies the competencies required to Develop Professionalism as per Organization's approved guidelines and procedures. You will be expected to create a personal vision / mission, manage your attitude, practice self-discipline, manage time, manage your professional development, and participate in trainings and performance review. Your underpinning knowledge about Develop Professionalism will be sufficient for you to provide the basics of the work.

Classification ISCED

0416 Wholesale and retail sales

Available grade

Competent / Not yet competent

Modification history

N/A

Unit of Competency	Performance Criteria	Knowledge
G1. Create a personal vision / mission	You must be able to: P1. Clarify / prioritize self-values and consider the value of others. P2. Clarify expectations of yourself and expectations others have of you. P3. Identify what you need to do to be successful (personal standards, targets, goals, principals) P4. Set specific short and long term goals. P5. Translate the vision into	You must be able to: K1. Explain long and short term goals. K2. Explain why personal vision and mission is important for success. K3. Describe the advantages of personal vision and mission.

	<p>actionable steps.</p> <p>P6. Integrate the vision into daily practice.</p> <p>P7. Recount frequently with your vision and change accordingly.</p>	
G2. Manage your attitude.	<p>You must be able to:</p> <p>P1. Challenge yourself, break old habits, and move out of your comfort zone.</p> <p>P2. Practice innovative techniques for out of the box creative thinking.</p> <p>P3. Seek out support and feedback from others on the team, in the organization / community etc.</p> <p>P4. Identify daily, weekly accomplishments.</p> <p>P5. Read inspirational material, audiotapes etc.</p>	<p>You must be able to:</p> <p>K1. Explain the importance of personal and professional motivation</p> <p>K2. Identify your positive attitude.</p> <p>K3. Explain the advantages of innovative ideas and techniques during job.</p>
G3. Practice self-discipline	<p>You must be able to:</p> <p>P1. Accountable for your performance.</p> <p>P2. Identify what you need to do to be successful.</p> <p>P3. Communicate your priorities to others.</p> <p>P4. Make and honour appointments with yourself and others.</p> <p>P5. Practice relaxation and energizing techniques.</p>	<p>You must be able to:</p> <p>K1. Explain the importance of communication.</p> <p>K2. Explain the advantages of self-discipline.</p>
G4. Manage time	<p>You must be able to:</p> <p>P1. Isolate key success activities and prioritize them.</p> <p>P2. Breakdown large tasks down into manageable action steps (set time frame).</p> <p>P3. Create or adopt action plans and follow it.</p> <p>P4. Set aside appropriate blocks of time for goal-related activities.</p>	<p>You must be able to:</p> <p>K1. Explain the importance of time management to achieve different tasks.</p>

P5. Make the best possible use of support people / recourses to accomplish tasks.

<p>G5.Manage your professional development</p>	<p>You must be able to:</p> <p>P1. Take inventory of your personal interests, abilities, skills, knowledge etc.</p> <p>P2. Identify and prioritize the strengths and gaps.</p> <p>P3. Use available assessment tools.</p> <p>P4. Create a personal growth strategy / career path.</p> <p>P5. Set personal goals and timeframe for achieving them.</p> <p>P6. Learn from your mistakes.</p>	<p>You must be able to:</p> <p>K1. Explain the importance and need of professional development.</p>
<p>G6.Participate in trainings and performance review</p>	<p>You must be able to:</p> <p>P1. Analyse, evaluate and improve performance, and report significant issues/problems to senior management</p> <p>P2. Demonstrate to-do attitude in profession</p> <p>P3. Demonstrate understanding of skills requirements</p> <p>P4. Use the competences acquired in trainings</p>	<p>You must be able to:</p> <p>K1. Define concept about performance standards.</p> <p>K2. Explain policies, procedures and regulations regarding human resources of the organization.</p> <p>K3. Explain self-planning and management techniques</p> <p>K4. Define goals and strategies of self- development.</p> <p>K5. Explain relevant knowledge about training / job requirements</p>

Comply with health and safety regulations

Purpose

This Competency standard identifies the competencies required to comply with health and Safety Regulations as per Organization's approved guidelines and procedures. You will be expected to interpret health and safety regulations, apply basic safety procedures and apply basic emergency procedures. Your underpinning knowledge about comply with health and safety regulations will be sufficient for you to provide the basics of the work.

Classification ISCED

0416 Wholesale and retail sales

Available grade

Competent / Not yet competent

Modification history

N/A

Unit of Competency	Performance Criteria	Knowledge
H1. Interpret health and safety regulations, standards and guidelines of an organization.	You must be able to: P1. Identify, understand and apply health and safety regulations at workplace P2. Assess risk of injury and equipment damages in common work situations and report to department concerned for timely response P3. Participate in quality enhancement of products or services of the	You must be able to: K1. Explain concepts and principles of health, safety, quality and environment regulations. K2. Define types of risk of injuring and equipment damages. K3. Describe types of risk and injury at workplace. K4. Explain the procedure of dealing with risk and injury

	<p>organization</p> <p>P4. Comply with quality and safety standards effectively</p> <p>P5. Handle toxic and hazardous material and product with caution</p> <p>P6. Assess risk of injuries and accidents and report it to senior management for avoiding serious injuries</p>	<p>situation.</p> <p>K5. Explain health and safety policies and guidelines of the organization.</p> <p>K6. define characteristics and types of toxic and hazardous material or products offered by company and their impact on environment.</p>
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H2. Apply basic safety procedures.

You must be able to:

- P1. Follow safety procedures to achieve a safe work environment, according to all relevant WHS legislation, including codes of practice relating to particular hazards in the industry or workplace.
- P2. Identify and report unsafe work practices , including faulty plant and equipment according to company policy and procedures
- P3. Manage dangerous goods and substances according to company policy and relevant legislation.
- P4. Identify potential manual handling risks and manage manual handling tasks according to company policy.
- P5. Report work-related incidents and accidents to designated personnel.
- P6. Participate in consultative processes and procedures for WHS.

You must be able to:

- K1. Explain appropriate use of personal protective clothing.
- K2. Explain the procedure to eliminating hazards.
- K3. Explain first aid procedures.

<p>H3. Apply basic emergency procedures.</p>	<p>You must be able to:</p> <ul style="list-style-type: none"> P1. Follow fire and emergency procedures, including evacuation, according to company policy and legislation. P2. Identify designated personnel responsible for first aid and evacuation procedures. P3. .Accurately identifies safety alarms. 	<p>You must be able to:</p> <ul style="list-style-type: none"> K1. Define fire, chemical and electrical hazards K2. Explain slip, trips and falls K3. Explain the procedure of storage of dangerous goods and hazardous substances and waste. K4. Define communication and consultation processes. K5. Explain manual handling procedures.
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