

Model Curriculum

Gemstone Rough Cutter

SECTOR: GEMS & JEWELLERY
SUB-SECTOR: GEMSTONE PROCESSING
OCCUPATION: ROUGH CUTTING
REF ID: G&J/Q6502, V1.0
NSQF LEVEL: 3



Certificate

CURRICULUM COMPLIANCE TO QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARDS

is hereby issued by the

GEM & JEWELLERY SECTOR SKILL COUNCIL OF INDIA

for the


MODEL CURRICULUM

Complying to National Occupational Standards of
Job Role/ Qualification Pack: **'Gemstone Rough Cutter'** QP No. **'G&J/Q6502 NSQF Level 3'**

Date of Issuance: **October 15th, 2016**

Valid up to: **October 14th, 2018**

* Valid up to the next review date of the Qualification Pack


Mr. Premkumar Kothari
Chairman
(Gem & Jewellery Skill Council of India)

Gemstone Rough Cutter

CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a “Gemstone Rough Cutter”, in the “Gems & Jewellery” Sector and aims at building the following key competencies amongst the learner

| | | | |
|---|--|----------------------------|-----|
| Program Name | Gemstone Rough Cutter | | |
| Qualification Pack Name & Reference ID | G&J/Q6502, v1.0 | | |
| Version No. | 1.0 | Version Update Date | N.A |
| Pre-requisites to Training | 10th standard passed, preferably | | |
| Training Outcomes | <p>After completing this programme, participants will be able to:</p> <ul style="list-style-type: none"> • Cut the rough gemstone procured from mine or supplier: Conduct slicing or cutting of the rough gemstone either for fulfilling customer’s specific requirement of shape and size or for maximising yield, with or without inclusions. • Maintain IPR at work: Respecting Intellectual Property Rights of the company’s products and designs. • Coordinate with colleagues: Identify team work and level of communication with colleagues or clients. It determines the ability to work as a team member, share work and multi-task in order to achieve the required deliverables on schedule. • Maintain safety at work: Make commitment towards reporting potential hazards, taking preventive measures to contain accidents in order to make the work environment safe for self and colleagues and maintaining a clean working environment. | | |

This course encompasses 4 out of 4 National Occupational Standards (NOS) of “Gemstone Rough Cutter” Qualification Pack issued by “Gem & Jewellery Skill Council of India”.

| Sr. No. | Module | Key Learning Outcomes | Equipment Required |
|---------|---|---|--|
| 1 | <p>Cut rough gemstone Theory Duration (hh:mm) 20:00</p> <p>Practical Duration (hh:mm) 120:00</p> <p>Corresponding NOS Code G&J/N6501</p> | <ul style="list-style-type: none"> To plan and mark rough stones as per required shape, size and weight To identify appropriate tools and equipment To produce easy to shape cut stones To achieve accurate calibrated stones To deliver scratch free gem surfaces To maintain stone loss within prescribed limits especially for precious stones To identify basic gemmological properties of different types of gemstones To identify different types of gemstones To understand the market value of gemstones being cut depending on geographical locations and quality factors To decide on best cut for the stone as per the gemmological properties of the stone To conduct required acceptable treatments on stones as per their inclusions To acquire required symmetry of gemstone | <p>Mandatory – Faceting machines with entire set of dops, table block, index gear, transfer fixture; gemstone slicing machine; alcohol lamp; flame torch; dop wax stick; tweezers; measuring gauge or calipers; 10x triplet loupe or gem magnifying lens; cutting laps of different grits; slab saw; trim saw; faceter’s trim saw; diamond powder; silicon carbide powder; cerium oxide powder; tin oxide powder; chromium oxide powder; aluminum oxide powder; different types of rough precious, semi-precious and simulant or imitation stones; weighing scale; grading lamp; torch light; calculators; basic furniture required for setting up the cutting and faceting machines; plastic tubs;</p> |
| 2 | <p>Maintain IPR at work Theory Duration (hh:mm) 01:00</p> <p>Practical Duration (hh:mm) 02:00</p> <p>Corresponding NOS Code G&J/N9920</p> | <ul style="list-style-type: none"> To prevent leak of new designs/ plans to competitors by reporting on time To be aware of any of company’s product, process or design patents To report IPR violations observed in the market, to supervisor or company heads To know the basics of IPR and patent laws | <p>Computer or laptop attached to LCD projector; whiteboard; whiteboard markers; Pen; Pencil; Eraser; Note Pad</p> |

| Sr. No. | Module | Key Learning Outcomes | Equipment Required |
|---------|--|---|---|
| 3 | <p>Coordinate with colleagues</p> <p>Theory Duration (hh:mm) 02:00</p> <p>Practical Duration (hh:mm) 02:00</p> <p>Corresponding NOS Code G&J/N9921</p> | <ul style="list-style-type: none"> Learn how to coordinate with supervisor, colleagues and others Learn the importance of interaction and coordination for personal growth | Computer or laptop attached to LCD projector; whiteboard; whiteboard markers; Pen; Pencil; Eraser; Note Pad |
| 4 | <p>Maintain Safety at Work</p> <p>Theory Duration (hh:mm) 01:00</p> <p>Practical Duration (hh:mm) 02:00</p> <p>Corresponding NOS Code G&J/N9924</p> | <ul style="list-style-type: none"> Learn about safety procedures Learn about potential hazards in workplace Learn what to do in an emergency situation Learn to use the fire extinguisher by identifying the appropriate fire Learn how to comply with company safety rules and regulations | First aid kit; fire extinguisher; emergency plan outline; Pen; Pencil; Eraser; Note Pad |
| | <p>Total Duration 150:00</p> <p>Theory Duration 24:00</p> <p>Practical Duration 126:00</p> | <p>Unique Equipment Required: Faceting machines with entire set of dops, table block, index gear, transfer fixture; gemstone slicing machine; alcohol lamp; flame torch; dop wax stick; tweezers; measuring gauge or calipers; 10x triplet loupe or gem magnifying lens; cutting laps of different grits; slab saw; trim saw; faceter's trim saw; diamond powder; silicon carbide powder; cerium oxide powder; tin oxide powder; chromium oxide powder; aluminum oxide powder; different types of rough precious, semi-precious and simulant or imitation stones; weighing scale; grading lamp; torch light; calculators; basic furniture required for setting up the cutting and faceting machines; plastic tubs; First aid kit; fire extinguisher; emergency plan outline; Pen; Pencil; Eraser; Note Pad</p> | |

Grand Total Course Duration: **150 Hours, 0 Minutes**

(This syllabus/ curriculum has been approved by [Gem and Jewellery Skill Council of India](#))

Trainer Prerequisites for Job role: “Gemstone Rough Cutter” mapped to Qualification Pack: “G&J/Q6502, v1.0.”

| Sr. No. | Area | Details |
|---------|---|---|
| 1 | Job Description | To deliver accredited training service, mapping to the curriculum detailed above, in accordance with the Qualification Pack “G&J/Q6502”, Version 1.0. |
| 2 | Personal Attributes | Aptitude for conducting training, and pre/post work to ensure competent, employable candidates at the end of the training. Strong communication skills, interpersonal skills, ability to work as part of a team; a passion for quality and for developing others; well-organised and focused, eager to learn and keep oneself updated with the latest in the mentioned field. |
| 3 | Minimum Educational Qualifications | Graduate, preferably |
| 4a | Domain Certification | Certified for Job Role: <u>Gemstone Rough Cutter</u> mapped to QP: “ <u>G&J/Q6502, v1.0</u> ”. Minimum accepted score as per SSC guidelines is 80% on the SSC prescribed online theory assessment test based on an industry validated question bank. |
| 4b | Platform Certification | Recommended that the Trainer is certified for the Job Role: “Trainer”, mapped to the Qualification Pack: “SSC/1402”. Minimum accepted score for the trainer is 80% as per SSC guidelines. |
| 5 | Experience | Minimum 3 years of experience in rough gemstone cutting |

Annexure: Assessment Criteria

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|-----------------------------|---|
| Assessment Criteria | |
| Job Role | Gemstone Rough Cutter |
| Qualification Pack | G&J/Q6502, v1.0 |
| Sector Skill Council | Gem & Jewellery Skill Council of India |

| Sr. No. | Guidelines for Assessment |
|----------------|---|
| 1 | Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC. |
| 2 | The assessment for the theory part will be based on knowledge bank of questions created by the SSC |
| 3 | Individual assessment agencies will create theory question papers for candidates at every examination/training centre. (as per assessment criteria below) |
| 4 | Individual assessment agencies will create practical tests for skill evaluation for candidates at every examination/training centre. (as per assessment criteria below) |
| 5 | To pass the Qualification Pack, every candidate should score a minimum 50% of aggregate marks to successfully clear the assessment. |
| 6 | In case of successfully passing only certain number of NOSs, the candidate is eligible to take subsequent assessment on the balance NOSs to pass the Qualification Pack. |

| Assessment outcomes | Assessment Criteria for outcomes | Marks Allocation | | | |
|--|---|---------------------|--------------|-----------|------------------|
| | | Total Marks (80+20) | Out Of | Theory | Skills Practical |
| 1. G&J/N6501 Cut rough gemstone | PC1. Cut stones cut within acceptable limits of weight loss | 75 | 10 | 2 | 8 |
| | PC2. Accurately plan and mark for required shape, size and weight | | 10 | 2 | 8 |
| | PC3. Use correct blade or saw | | 10 | 2 | 8 |
| | PC4. Produce easy to shape cut stones in further processing | | 10 | 2 | 8 |
| | PC5. Achieve accurate calibration | | 10 | 2 | 8 |
| | PC6. Achieve maximum number of qc okayed stones | | 5 | 0 | 5 |
| | PC7. Achieve number and carats of stones cut per day against target given | | 5 | 0 | 5 |
| | PC8. Deliver scratch-less surface of cut stones | | 5 | 0 | 5 |
| | PC9. Maintain stone loss within prescribed limits, particularly, in precious stones | | 5 | 0 | 5 |
| | PC10. Deliver cut stones in time by reporting problems faced or anticipated well in advance | | 5 | 0 | 5 |
| | PC11. Cut stones cut within acceptable limits of weight loss | | 10 | 2 | 8 |
| | | | Total | 75 | 10 |
| 2. G&J/N9920 Maintain IPR at work | PC1. Be aware of patents and IPR | 3 | 2 | 2 | 0 |
| | PC2. Not be involved in IPR violations | | 1 | 1 | 0 |
| | | | Total | 3 | 3 |
| 3. G&J/N9921 Coordinate with colleagues | PC1. Understand the work output requirements | 10 | 4 | 0 | 4 |
| | PC2. Comply with company policy and rule | | 1 | 1 | 0 |
| | PC3. Deliver quality work on time as required by reporting any anticipated reasons for delays | | 3 | 0 | 3 |
| | PC4. Put team over individual goals | | 1 | 1 | 0 |
| | PC5. Resolve conflicts and multi-task | | 1 | 1 | 0 |
| | | | Total | 10 | 3 |
| | PC1. Spot and report potential hazards on time | 12 | 1 | 1 | 0 |

| | | | | | |
|---|---|------------|------------|------------|------------|
| 4. G&J/N9924 Maintain safety at work | PC2. Follow company policy and rules regarding use of hazardous materials | | 3 | 1 | 2 |
| | PC3. Deliver quality work on time as required by reporting any anticipated reasons for delays | | 1 | 1 | 0 |
| | PC4. Use or wear safety gear as per the rules of the company | | 3 | 1 | 2 |
| | PC5. Clean the work station | | 2 | 0 | 2 |
| | PC6. Organise tools and equipment in use | | 2 | 0 | 2 |
| | Sub Total | | 12 | 4 | 8 |
| | Grand Total | 100 | 100 | 20 | 80 |
| | Percentage Weightage: | | | 20% | 80% |
| | Minimum Pass % to qualify (aggregate): | | | 50% | |