

| **Model Curriculum****QP Name: Planner – Diamond Processing** **Options: Marker****QP Code: G&J/Q4207****QP Version: 3.0****NSQF Level: 3****Model Curriculum Version: 3.0** |
| --- |
| Gems & Jewellery Skill Council of India Business Facilitation Centre, 3rd Floor, Seepz Special Economic Zone, Andheri (E). Mumbai 400 096. |

**Table of Contents**

[Training Parameters 3](#_heading=h.2qszl5kzl2m9)

[Program Overview 5](#_heading=h.mh5ry8pd3aj2)

[Training Outcomes 5](#_heading=h.mxbl9i359d2l)

[Compulsory Modules 5](#_heading=)

[Elective Modules 6](#_heading=h.u1xboblhlyz2)

[Module Details 7](#_heading=h.pcq11dnkmh4o)

[Module 1: Introduction and orientation to the gems and jewellery sector 7](#_heading=h.k13skytmpj57)

[Module 2: Plan the final cut of the diamond 8](#_heading=h.ixz86nrq57t4)

[Module 3: Maintain health and safety at workplace 10](#_heading=h.g1lpe7m89y9)

[Module 4: Implement Circular Economy and Sustainable Practices in Gem and Jewellery Industry 11](#_heading=h.sfba15pfr90v)

[Module 5: Introduction to Employability Skills 12](#_heading=h.qs1r0rnarhxs)

[Module 6: Constitutional values - Citizenship 13](#_heading=h.lr8jzl7zrtqd)

[Module 7: Becoming a Professional in the 21st Century 14](#_heading=h.5j3wqusp7kw2)

[Module 8: Basic English Skills 15](#_heading=h.bjspxcjg1d2o)

[Module 9: Communication Skills 16](#_heading=h.xsik2l965xct)

[Module 10: Diversity & Inclusion 17](#_heading=h.z01ixe7xgzx)

[Module 11: Financial and Legal Literacy 18](#_heading=h.uzgtkd6gqv6h)

[Module 12: Essential Digital Skills 19](#_heading=h.8n3wk6exokwv)

[Module 13: Entrepreneurship 20](#_heading=h.5pbjj577rsio)

[Module 14: Customer Service 21](#_heading=h.vut2x5mxezkx)

[Module 15: Getting ready for apprenticeship & Jobs 22](#_heading=h.8naw43c9ns18)

[Module 16: Mark the rough diamond 23](#_heading=h.7641h9vefdmp)

[Annexure 25](#_heading=h.ktr5ncci1798)

[Trainer Requirements 25](#_heading=h.f62ughyqynga)

[Assessor Requirements 26](#_heading=h.e3j0wbj22rqe)

[Assessment Strategy 27](#_heading=h.wi2alsi9njnt)

[References 29](#_heading=h.uma6r0u3o8lk)

[Glossary 29](#_heading=h.jz2s5f6kqed4)

[Acronyms and Abbreviations 31](#_heading=h.i34kmj2ool5e)

 References 26

Glossary 26

Acronyms and Abbreviations 28

# Training Parameters

| **Sector** | Gems & Jewellery Skill Council of India |
| --- | --- |
| **Sub-Sector** | Diamond Processing |
| **Occupation** | Diamond Planning |
| **Country** | India |
| **NSQF Level** | 3 |
| **Aligned to NCO/ISCO/ISIC Code** | NCO-2015/8189.0401 |
| **Minimum Educational Qualiﬁcation and Experience**  | 9th Grade pass (No Experience required) OR 8th Grade pass (1-year relevant experience) OR Previous relevant Qualification of NSQF Level 3 (1-year relevant experience) |
| **Pre-Requisite License or Training**  | NA |
| **Minimum Job Entry Age** | 18 Years |
| **Last Reviewed On**  |  |
| **Next Review Date** |  |
| **NSQC Approval Date** |  |
| **QP Version**  | 2.0 |
| **Model Curriculum Creation Date** |  |
| **Model Curriculum Valid Up to Date** |  |
| **Model Curriculum Version***<* | 2.0 |
| **Minimum Duration of the Course** | 420 Hours |
| **Maximum Duration of the Course** | 420 Hours |

# Program Overview

This section summarizes the end objectives of the program along with its duration.

## Training Outcomes

At the end of the program, the learner should have acquired the listed knowledge and skills.

* Identify the optimal shape and size for the final polished diamond from the rough stone.
* Apply effective team collaboration techniques to maintain high standards of quality and meet production timelines.
* Follow established health and safety protocols in the workplace.
* Make precise markings on the rough diamond to direct the next steps like windowing, sawing, and cleaving.

## Compulsory Modules

The table lists the modules and their duration corresponding to the Compulsory NOS of the QP.

| NOS and Module Details | TheoryDuration | PracticalDuration | On-the-Job Training Duration (Mandatory) | On-the-Job Training Duration (Recommended) | Total Duration |
| --- | --- | --- | --- | --- | --- |
| G&J/N4202 – Plan the final cut of the diamondNOS Version No. 3.0NSQF Level 4 | **40:00** | **170:00** | - | - | **210:00** |
| Module 1: Introduction and orientation of the job role to the gems and jewellery sector  | 5:00 | 0:00 | - | - | 5:00 |
| Module 2: Plan the final cut of the diamond | 35:00 | 170:00 | - | - | 205:00 |
| G&J/N9902 – Maintain health and safety at workplaceNOS Version No. 3.0NSQF Level 3 | **8:00** | **22:00** | **-** | **-** | **30:00** |
| Module 3: Health and safety at workplace | 8:00 | 22:00 | - | - | 30:00 |
| G&J/Nxxxx: Implement Circular Economy and Sustainable Practices in Gem and Jewellery IndustryNOS Version No. V1.0NSQF Level 2 | **10:00** | **20:00** | **00:00** | **00:00** | **30:00** |
| Module 4: Implement Circular Economy and Sustainable Practices in Gem and Jewellery Industry | 10:00 | 20:00 | 00:00 | 00:00 | 30:00 |
| DGT/VSQ/N0101 - Employability Skills (30 hours)NOS Version No. – 1.0 NSQF Level – 2 | **12:00** | **18:00** | **-** | **-** | **30:00** |
| Module 5: Introduction to Employability Skills | 0.5:00 | 0.5:00 | - | - | 1:00 |
| Module 6: Constitutional values - Citizenship | 0.5:00 | 0.5:00 | - | - | 1:00 |
| Module 7: Becoming a Professional in the 21st Century | 0.5:00 | 0.5:00 | - | - | 1:00 |
| Module 8: Basic English Skills | 1:00 | 1:00 | - | - | 2:00 |
| Module 9: Communication Skills | 1.5:00 | 2.5:00 | - | - | 4:00 |
| Module 10: Diversity & Inclusion | 0.5:00 | 0.5:00 | - | - | 1:00 |
| Module 11: Financial and Legal Literacy | 1.5:00 | 2.5:00 | - | - | 4:00 |
| Module 12: Essential Digital Skills | 1:00 | 2:00 | - | - | 3:00 |
| Module 13: Entrepreneurship | 2.5:00 | 4.5:00 | - | - | 7:00 |
| Module 14: Customer Service | 1.5:00 | 2.5:00 | - | - | 4:00 |
| Module 15: Getting ready for apprenticeship & Jobs | 1:00 | 1:00 | - | - | 2:00 |
| Total Duration | **90:00** | **330:00** | **-** | **-** | **420:00** |

## Elective Modules

The table lists the modules and their duration corresponding to the Elective NOS of the QP.

**Elective 1: Pre-shape or pre-form gemstone**

| **NOS and Module Details** | **Theory Duration** | **Practical Duration** | **On-the-Job Training Duration (Mandatory)** | **On-the-Job Training Duration (Recommended)** | **Total Duration** |
| --- | --- | --- | --- | --- | --- |
| **G&J/N6602 – Pre-shape or pre-form gemstone****NOS Version No. 3.0****NSQF Level 3** | **30:00** | **120:00** | **00:00** | - | **150:00** |
| Module 16: Mark the rough diamond | 30:00 | 120:00 | 00:00 | **-** | 150:00 |
| **Total Duration** | **30:00** | **120:00** | **00:00** | - | **150:00** |

# Module Details

## Module 1: Introduction and orientation to the gems and jewellery sector

***Bridge Module, v3.0***

**Terminal Outcomes:**

* Explain the overview of the sector

| Duration: *5:00* | Duration: *0:00* |
| --- | --- |
| **Theory – Key Learning Outcomes**  | **Practical – Key Learning Outcomes** |
| * Explain the scope of the Gems and Jewellery sector.
* List job opportunities for the planner.
* Discuss the role and responsibilities of a Planner – Diamond Processing.
* Explain the basics of planning.
 |  |
| **Classroom Aids:** |
| Laptop, white board, marker, projector |
| **Tools, Equipment and Other Requirements**  |
| **10x eyeglass, Calculator** |

## Module 2: Plan the final cut of the diamond

***Mapped to G&J/N4202, v3.0***

**Terminal Outcomes:**

* Demonstrate the ability to analyze and model rough diamonds using AI and 3D scanning tools.
* Implement smart planning and defect detection techniques to improve cutting accuracy and reduce waste.
* Optimize workflow and resource management using automation, predictive analytics, and remote tools.
* Maintain high standards of sustainability and traceability by applying eco-friendly practices and blockchain tracking.

| Duration:*<35:00>* | Duration:*<170:00>* |
| --- | --- |
| **Theory – Key Learning Outcomes**  | **Practical – Key Learning Outcomes** |
| * Explain the use of AI-powered imaging in assessing the color, purity, and structure of rough diamonds.
* Describe the process of real-time 3D scanning and its role in accurate windowing and digital modeling.
* Discuss the importance of cloud-based data storage for tracking and categorizing rough diamonds.
* Illustrate how AR overlays support precision in marking prior to windowing.
* Compare traditional and automated laser mapping methods in terms of error reduction and efficiency.
* Identify inclusions and flaws through AI-driven defect detection before planning the cut.
* Analyze how machine learning predicts cutting strategies using historical performance data.
* Evaluate the benefits of blockchain in ensuring traceability and authenticity of diamonds.
* Justify the use of eco-friendly materials in diamond cleaning and adhesion processes.
* Interpret how non-contact laser technology ensures zero-damage during marking and processing.
* Examine the role of AI-assisted workflow automation in managing multiple diamonds simultaneously.
* Assess how predictive analytics can prioritize high-value roughs for better work allocation.
* Summarize the impact of remote monitoring and control on improving planning operations.
 | * Operate AI-powered imaging tools to analyze rough diamonds for structure, color, and purity.
* Perform real-time 3D scans and generate accurate digital models for rough diamonds.
* Upload and organize diamond data in a cloud-based system for seamless retrieval.
* Apply AR overlays during marking to enhance precision before sending for windowing.
* Execute automated laser mapping to generate detailed and error-free imaging.
* Detect internal flaws or inclusions using AI-driven tools before creating cutting plans.
* Run machine learning models to suggest optimal cutting strategies for specific roughs.
* Track each rough diamond using a blockchain system from analysis to final product.
* Use non-toxic adhesives and eco-friendly cleaners during the pre-cutting process.
* Utilize non-contact laser devices to mark and process diamonds without causing damage.
* Manage multiple diamond assessments simultaneously with the help of AI automation.
* Prioritize rough diamonds based on real-time predictive data to optimize value extraction.
* Control planning operations remotely using smart monitoring tools and dashboards.
 |
| **Classroom Aids:** |
| Whiteboard, marker pen, computer or laptop attached to LCD projector, scanner, computer speakers |
| **Tools, Equipment and Other Requirements**  |
| Diamond planning and marking machine (Lotus diamond planning machine, Helium Rough, Sarin diamond planning machine etc.), Planning software, Die pins, Label printer, Labels or Printing roll |

## Module 3: Maintain health and safety at workplace

***Mapped to G&J/N9902, v3.0***

**Terminal Outcomes:**

* Apply government norms and policies on occupational health and safety at work.
* Adhere to the safety guidelines of the organization.

| Duration:*<08:00>* | Duration:*<22:00>* |
| --- | --- |
| **Theory – Key Learning Outcomes**  | **Practical – Key Learning Outcomes** |
| * Explain workplace hazards and risks.
* List personal protective equipment like safety gloves, glasses, shoes and mask used at the workplace.
* Identify various warning signs used at the workplace.
* Describe appropriate strategies to deal with emergencies and accidents at the workplace.
* Explain different types of waste identified in industry.
* Explain various methods of waste management.
* Distinguish between different colour coded dustbins.
 | * Demonstrate best practices to remove potential hazards at the workplace and prevent accidents.
* Demonstrate the use of PPE.
* Demonstrate the use of fire extinguisher.
* Demonstrate first aid procedure in case of emergencies.
* Demonstrate the procedure of handling and disposing different types of waste.
 |
| **Classroom Aids:** |
| Whiteboard, Marker pen, Computer or Laptop attached to LCD projector, Scanner, Computer speakers |
| **Tools, Equipment and Other Requirements:** |
| Safety hand gloves, Glasses, Safety shoes, Mask, Fire extinguisher, First aid kit |

## Module 4: Implement Circular Economy and Sustainable Practices in Gem and Jewellery Industry

***Mapped to G&J/Nxxxx, v1.0***

**Terminal Outcomes:**

* Explain the principles of the circular economy and their relevance to sustainable practices in the gem and jewellery industry.
* Implement design techniques that enhance jewellery recyclability and reusability while minimizing material waste.
* Analyze the environmental and economic impact of material wastage, hazardous waste, and energy consumption in jewellery manufacturing.
* Optimize jewellery production processes by incorporating responsible sourcing, energy-efficient equipment, and waste management techniques.

| Duration: *10:00* | Duration: *20:00* |
| --- | --- |
| **Theory – Key Learning Outcomes**  | **Practical – Key Learning Outcomes** |
| * Explain the principles of the circular economy and its relevance to the gem and jewellery industry.
* Describe the methods for designing jewellery that support recyclability and reusability.
* Identify the best practices for responsible sourcing of gemstones and metals in jewellery production.
* Analyze the impact of material wastage on cost, sustainability, and environmental degradation.
* Compare different waste management techniques, including recycling, upcycling, and safe disposal.
* Illustrate the process of recovering and reintegrating lost gold into production.
* Evaluate the role of renewable energy in jewellery manufacturing and its benefits.
* Discuss industry regulations and policies related to sustainable and circular economy practices.
* Summarize the significance of energy-efficient equipment and conservation techniques in jewellery production.
* Assess the environmental impact of hazardous waste generated in jewellery manufacturing and methods to mitigate it.
 | * Demonstrate the process of identifying and selecting recyclable materials for jewellery production.
* Implement modular design techniques that enable easy disassembly and reassembly of jewellery pieces.
* Apply proper sorting and waste segregation practices for better recycling and disposal.
* Operate energy-efficient equipment and monitor their performance to reduce power consumption.
* Develop a documentation system to track and record recycled and upcycled materials.
* Conduct a basic energy audit to identify inefficiencies in jewellery production processes.
* Modify jewellery manufacturing processes to incorporate wax pattern reuse in the lost wax casting method.
* Optimize water usage by implementing conservation measures such as recycling wastewater for non-production activities.
* Design a take-back program for old and unwanted jewellery to promote sustainable practices.
* Monitor and adjust indoor lighting, ventilation, and AC settings to enhance energy conservation in daily operations.
 |
| **Classroom Aids:** |
| Laptop, white board, marker, projector |
| **Tools, Equipment and Other Requirements**  |
| Recycling bins, waste segregation containers, modular design tools, digital design software, energy-efficient furnaces, renewable energy sources (solar panels, wind turbines), water recycling systems, waste tracking software, gold recovery units, wax pattern reuse equipment, take-back program infrastructure, energy audit tools, LED lighting systems, ventilation control devices, air quality monitors, sorting trays, eco-friendly packaging materials, jewellery dismantling tools, upcycling workstations, regulatory compliance documents, sustainable sourcing databases |

## Module 5: Introduction to Employability Skills

***Mapped to DGT/VSQ/N0101***

**Terminal Outcomes:**

* Discuss about Employability Skills in meeting the job requirements

| **Duration**: *<0.5:00>* | **Duration**: *<0.5:00>* |
| --- | --- |
| **Theory – Key Learning Outcomes**  | **Practical – Key Learning Outcomes** |
| * Discuss the importance of Employability Skills in meeting the job requirements
 | * Demonstrate Employability Skills
 |
| **Classroom Aids:** |
| Whiteboard, marker pen, projector |
| **Tools, Equipment and Other Requirements**  |
|  |

## Module 6: Constitutional values - Citizenship

***Mapped to DGT/VSQ/N0101***

**Terminal Outcomes:**

* Discuss about constitutional values to be followed to become a responsible citizen

| **Duration**: *<0.5:00>* | **Duration**: *<0.5:00>* |
| --- | --- |
| **Theory – Key Learning Outcomes**  | **Practical – Key Learning Outcomes** |
| * Explain constitutional values, civic rights, duties, citizenship, responsibility towards society etc. that are required to be followed to become a responsible citizen.
 | * Show how to practice different environmentally sustainable practices
 |
| **Classroom Aids:** |
| Whiteboard, marker pen, projector |
| **Tools, Equipment and Other Requirements**  |
|  |

## Module 7: Becoming a Professional in the 21st Century

***Mapped to DGT/VSQ/N0101***

**Terminal Outcomes:**

* Demonstrate professional skills required in 21st century

| **Duration**: *<0.5:00>* | **Duration**: *<0.5:00>* |
| --- | --- |
| **Theory – Key Learning Outcomes**  | **Practical – Key Learning Outcomes** |
| * Discuss 21st century skills.
 | * Display positive attitude, self -motivation, problem solving, time management skills and continuous learning mindset in different situations.
 |
| **Classroom Aids:** |
| Whiteboard, marker pen, projector |
| **Tools, Equipment and Other Requirements**  |
|  |

## Module 8: Basic English Skills

***Mapped to DGT/VSQ/N0101***

**Terminal Outcomes:**

* Practice basic English speaking.

| **Duration**: *<1:00>* | **Duration**: *<1:00>* |
| --- | --- |
| **Theory – Key Learning Outcomes**  | **Practical – Key Learning Outcomes** |
| * Discuss need of basic English skills.
 | * Use appropriate basic English sentences/phrases while speaking
 |
| **Classroom Aids:** |
| Whiteboard, marker pen, projector |
| **Tools, Equipment and Other Requirements**  |
|  |

## Module 9: Communication Skills

***Mapped to DGT/VSQ/N0101***

**Terminal Outcomes:**

* Practice basic communication skills.

| **Duration**: *<1.5:00>* | **Duration**: *<2.5:00>* |
| --- | --- |
| **Theory – Key Learning Outcomes**  | **Practical – Key Learning Outcomes** |
| * Discuss need of communication skills
* Describe importance of team work
 | * Demonstrate how to communicate in a well -mannered way with others.
* Demonstrate working with others in a team
 |
| **Classroom Aids:** |
| Whiteboard, marker pen, projector |
| **Tools, Equipment and Other Requirements**  |
|  |

## Module 10: Diversity & Inclusion

***Mapped to DGT/VSQ/N0101***

**Terminal Outcomes:**

* Describe PwD and gender sensitisation.

| **Duration**: *<0.5:00>* | **Duration**: *<0.5:00>* |
| --- | --- |
| **Theory – Key Learning Outcomes**  | **Practical – Key Learning Outcomes** |
| * Discuss the significance of reporting sexual harassment issues in time
 | * Show how to conduct oneself appropriately with all genders and PwD
 |
| **Classroom Aids:** |
| Whiteboard, marker pen, projector |
| **Tools, Equipment and Other Requirements**  |
|  |

## Module 11: Financial and Legal Literacy

***Mapped to DGT/VSQ/N0101***

**Terminal Outcomes:**

* Describe ways of managing expenses, income, and savings.

| **Duration**: *<1.5:00>* | **Duration**: *<2.5:00>* |
| --- | --- |
| **Theory – Key Learning Outcomes**  | **Practical – Key Learning Outcomes** |
| * Discuss the significance of using financial products and services safely and securely.
* Explain the importance of managing expenses, income, and savings.
* Explain the significance of approaching the concerned authorities in time for any exploitation as per legal rights and laws
 | * Demonstrate ways of managing expenses, income, and savings.
 |
| **Classroom Aids:** |
| Whiteboard, marker pen, projector |
| **Tools, Equipment and Other Requirements**  |
|  |

## Module 12: Essential Digital Skills

***Mapped to DGT/VSQ/N0101***

**Terminal Outcomes:**

* Demonstrate procedure of operating digital devices and associated applications safely.

| **Duration**: *<1:00>* | **Duration**: *<2:00>* |
| --- | --- |
| **Theory – Key Learning Outcomes**  | **Practical – Key Learning Outcomes** |
| * Discuss the significance of using internet for browsing, accessing social media platforms, safely and securely
 | * Show how to operate digital devices and use the associated applications and features, safely and securely
 |
| **Classroom Aids:** |
| Whiteboard, marker pen, projector |
| **Tools, Equipment and Other Requirements**  |
|  |

## Module 13: Entrepreneurship

***Mapped to DGT/VSQ/N0101***

**Terminal Outcomes:**

* Describe opportunities as an entrepreneur.

| **Duration**: *<2.5:00>* | **Duration**: *<4.5:00>* |
| --- | --- |
| **Theory – Key Learning Outcomes**  | **Practical – Key Learning Outcomes** |
| * Discuss the need for identifying opportunities for potential business, sources for arranging money and potential legal and financial challenges
 | * Demonstrate ways for identifying opportunities for potential business, sources for arranging money and potential legal and financial challenges
 |
| **Classroom Aids:** |
| Whiteboard, marker pen, projector |
| **Tools, Equipment and Other Requirements**  |
|  |

## Module 14: Customer Service

***Mapped to DGT/VSQ/N0101***

**Terminal Outcomes:**

* Describe ways of maintaining customer.

| **Duration**: *<1.5:00>* | **Duration**: *<2.5:00>* |
| --- | --- |
| **Theory – Key Learning Outcomes**  | **Practical – Key Learning Outcomes** |
| * Differentiate between types of customers.
* Explain the significance of identifying customer needs and addressing them.
* Discuss the significance of maintaining hygiene and dressing appropriately.
 | * Show how to maintain hygiene and dressing appropriately.
 |
| **Classroom Aids:** |
| Whiteboard, marker pen, projector |
| **Tools, Equipment and Other Requirements**  |
|  |

## Module 15: Getting ready for apprenticeship & Jobs

***Mapped to DGT/VSQ/N0101***

**Terminal Outcomes:**

* Describe ways of preparing for apprenticeship & Jobs appropriately.

| **Duration**: *<1:00>* | **Duration**: *<1:00>* |
| --- | --- |
| **Theory – Key Learning Outcomes**  | **Practical – Key Learning Outcomes** |
| * Discuss the significance of dressing up neatly and maintaining hygiene for an interview
* Discuss how to search and register for apprenticeship opportunities
 | * Create a biodata
* Use various sources to search and apply for jobs
 |
| **Classroom Aids:** |
| Whiteboard, marker pen, projector |
| **Tools, Equipment and Other Requirements**  |
|  |

## Module 16: Mark the rough diamond

***Mapped to G&J/N4102, v3.0***

**Terminal Outcomes:**

* Demonstrate proficiency in AI-powered scanning, computer vision alignment, and automated cutting setup.
* Implement smart machine monitoring and automation techniques to enhance precision and efficiency.
* Optimize quality control and digital traceability using AI inspection, automated labeling, and blockchain tracking.
* Minimize material loss and breakage through predictive analytics and real-time machine monitoring.

| Duration:*<30:00>* | Duration:*<120:00>* |
| --- | --- |
| **Theory – Key Learning Outcomes**  | **Practical – Key Learning Outcomes** |
| * Explain the role of AI-powered scanning in verifying shape, size, and marking alignment before cutting.
* Describe the function of automated dop/stage locking mechanisms in securing diamonds for precision cutting.
* Illustrate how computer vision assists in aligning laser cutting lines for accuracy and error minimization.
* Analyse the impact of pre-programmed laser parameters on cutting efficiency using real-time data inputs.
* Evaluate the role of IoT-based machine monitoring in detecting temperature, pressure, and vibration anomalies.
* Discuss the benefits of AI-driven quality inspection in ensuring precise cutting along marked lines.
* Compare traditional and automated labeling methods for tracking diamonds post-cutting.
* Examine the use of blockchain for maintaining traceability from rough diamond to final product.
* Assess the advantages of multi-machine operation dashboards in optimizing workload and cycle times.
* Interpret how predictive analytics helps in minimizing weight loss and breakage by detecting defects in real time.
 | * Operate AI-powered scanning tools to verify shape, size, and marking alignment before cutting.
* Secure rough diamonds in the dop/stage locking system to ensure stability during cutting.
* Adjust laser cutting alignment using computer vision to achieve high precision.
* Configure pre-programmed laser settings based on real-time machine and material data.
* Monitor temperature, pressure, and vibration levels using IoT-based tracking systems.
* Inspect laser-cut diamonds using AI-driven quality control systems to ensure accuracy.
* Label and digitally track cut diamonds using automated systems for seamless traceability.
* Update blockchain records to log each diamond’s journey from rough to final cut.
* Optimize workload distribution using multi-machine dashboards for enhanced productivity.
* Detect and mitigate potential defects in real-time using predictive analytics to minimize material loss.
 |
| **Classroom Aids:** |
| Whiteboard, marker pen, computer or laptop attached to LCD projector, scanner, computer speakers |
| **Tools, Equipment and Other Requirements**  |
| Diamond planning and marking machine (Lotus diamond planning machine, Helium Rough, Sarin diamond planning machine etc.), Planning software, Die pins, 10x eyeglass, Label printer, Labels or Printing roll |

# Annexure

## Trainer Requirements

| Trainer Prerequisites |
| --- |
| Minimum Educational Qualification*<Select the minimum educational requirements, such as 12th Pass, Graduate or NSQF certified.>* | **Specialization***<Specify the areas of specialization that are desirable.>* | **Relevant Industry Experience** | **Training Experience** | **Remarks**  |
| ***Years*** | ***Specialization*** | ***Years*** | ***Specialization*** |  |
| 10th Pass | N.A. | 5 | Planning  | 2-3 | Planning |  |
| Certified in relevant CITS course as appropriate |  |  |  |  |  |  |

| Trainer Certification |
| --- |
| Domain Certification | **Platform Certification** |
| “Planner – Diamond Processing, G&J/Q4207, version2.0”. Minimum accepted score is 80%. |  “Trainer, MEP/Q2601”Minimum accepted score is 80%. |

## Assessor Requirements

| Assessor Prerequisites |
| --- |
| Minimum Educational Qualification *<Select the minimum educational requirements, such as 12th Pass, Graduate or NSQF certified.>* | **Specialization***<Specify the areas of specialization that are desirable.>* | **Relevant Industry Experience** | **Training/Assessment Experience** | **Remarks**  |
| ***Years*** | ***Specialization*** | ***Years*** | ***Specialization*** |  |
| 10th Pass | N.A. | 5 | Planning  | NA | NA |  |
| Certified in relevant CITS course as appropriate |  |  |  |  |  |  |

| Assessor Certification |
| --- |
| Domain Certification | **Platform Certification** |
| “Planner – Diamond Processing, G&J/Q4207, version2.0”. Minimum accepted score is 80%. |  “Assessor, MEP/Q2701”Minimum accepted score is 80%. |

## Assessment Strategy

1. Assessment System Overview:
* Batches assigned to the assessment agencies for conducting the assessment on SDSM/SIP or email
* Assessment agencies send the assessment confirmation to VTP/TC looping SSC
* Assessment agency deploys the ToA certified Assessor for executing the assessment
* SSC monitors the assessment process & records
1. Testing Environment:
* Confirm that the centre is available at the same address as mentioned on SDMS or SIP
* Check the duration of the training.
* Check the Assessment Start and End time to be as 10 a.m. and 5 p.m.
* If the batch size is more than 30 for STT and/ or 50 in RPL, then there should be 2 Assessors.
* Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.
* Check the mode of assessment—Online (TAB/Computer) or Offline (OMR/PP).
* Confirm the number of TABs on the ground are correct to execute the Assessment smoothly.
* Check the availability of the Lab Equipment for the particular Job Role.
1. Assessment Quality Assurance levels / Framework:
* Question papers created by the SME verified by the other subject Matter Experts
* Questions are mapped with NOS and PC
* Question Bank covers all performance criteria (PC) under each NOS of a QP. Each question can cover one or more PCs. Which means that every question needs to be mapped with PC.
* There are sufficient number of questions in the question bank, where multiple questions are available for each PC. Typically, the number of questions should be 3 to 4 times the number of PCs.
* Each question bank has around 150 to 200 questions.
* Each question has a difficulty level mentioned against it and the question bank has a good mix of easy, medium and difficult questions. So, for example out of 200 Questions the proportion could be 25 difficult/ hard, 75 Medium and 100 Easy level questions.
* Other than the Multiple-choice question (MCQ) few questions are created for Practical and viva too. For e.g., for 150-200 QB contains approximately 10-15 Viva & 10-15 practical questions.
* Assessor must be ToA certified & trainer must be ToT Certified
* Assessment agency must follow the assessment guidelines to conduct the assessment
1. Types of evidence or evidence-gathering protocol:
* Time-stamped & geotagged reporting of the assessor from assessment location
* Center photographs with signboards and scheme specific branding
* Biometric or manual attendance sheet (stamped by TP) of the trainees during the training period
* Time-stamped & geotagged assessment (Theory + Viva + Practical) photographs & videos
1. Method of verification or validation:
* Surprise visit to the assessment location
* Random audit of the batch
* Random audit of any candidate
1. Method for assessment documentation, archiving, and access
* Hard copies of the documents are stored
* Soft copies of the documents & photographs of the assessment are uploaded / accessed from Cloud Storage
* Soft copies of the documents & photographs of the assessment are stored in the Hard Drives

# References

## Glossary

|  | **Sector** | Sector is a conglomeration of diﬀerent business operations having similar business and interests. It may also be deﬁned as a distinct subset of the economy whose components share similar characteristics and interests. |
| --- | --- | --- |
|  | **Sub-sector** | Sub-sector is derived from a further breakdown based on the characteristics and interests of its components. |
|  | **Occupation** | Occupation is a set of job roles, which perform similar/ related set of functions in an industry. |
|  | **Job role** | Job role deﬁnes a unique set of functions that together form a unique employment opportunity in an organisation. |
|  | **Occupational Standards (OS)** | OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts. |
|  | **Performance Criteria (PC)** | Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task. |
|  | **National Occupational Standards (NOS)** | NOS are occupational standards which apply uniquely in the Indian context. |
|  | **Qualiﬁcations Pack (QP)** | QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualiﬁcations pack code. |
|  | **Unit Code** | Unit code is a unique identiﬁer for an Occupational Standard, which is denoted by an ‘N’ |
|  | **Unit Title** | Unit title gives a clear overall statement about what the incumbent should be able to do. |
|  | **Description** | Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for. |
|  | **Scope** | Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required. |
|  | **Knowledge and Understanding (KU)** | Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational speciﬁc knowledge that an individual needs in order to perform to the required standard. |
| **Organisational Context** | Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility. |
| **Technical Knowledge** | Technical knowledge is the speciﬁc knowledge needed to accomplish speciﬁc designated responsibilities. |
| **Core Skills/ Generic Skills (GS)** | Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today’s world. These skills are typically needed in any work environment in today’s world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles. |
| **Electives** | Electives are NOS/set of NOS that are identiﬁed by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives. |
| **Options** | Options are NOS/set of NOS that are identiﬁed by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options. |

## Acronyms and Abbreviations

| **NOS** | National Occupational Standard(s) |
| --- | --- |
| **NSQF** | National Skills Qualiﬁcations Framework |
| **QP** | Qualiﬁcations Pack |
| **TVET** | Technical and Vocational Education and Training |
| **PC** | Performance Criteria |
| **SSC** | Sector Skill Council |
| **AA** | Assessment Agency |
| **ToT** | Training of Trainers |
| **ToA** | Training of Assessors |
| **VTP** | Vocational Training Partner |
| **TC** | Training Center |
| **SME** | Subject Matter Expert |