

## QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR GEMS & JEWELLERY INDUSTRY

### What are Occupational Standards(OS)?

- OS describe what individuals need to do, know and understand in order to carry out a particular job role or function
- OS are performance standards that individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding

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## Introduction

### Qualifications Pack-Designer – CAD

**SECTOR:** GEMS & JEWELLERY

**SUB-SECTOR:** Cast and Diamonds-Set Jewellery

**OCCUPATION:** Designing and Product Development

**REFERENCE ID:** G&J/Q2303

**ALIGNED TO:** NCO-2004/ NIL

**CAD Designer:** Using computer aided design (CAD), the CAD designer produces drawings that serve as three-dimensional (3D) model for manufacturing jewellery.

**Brief Job Description:** The individual at work uses CAD software and tools to produce a range of jewellery designs that are also practical for manufacturing. CAD drawings provide all the information that forms the basis for every stage of manufacturing the jewellery.

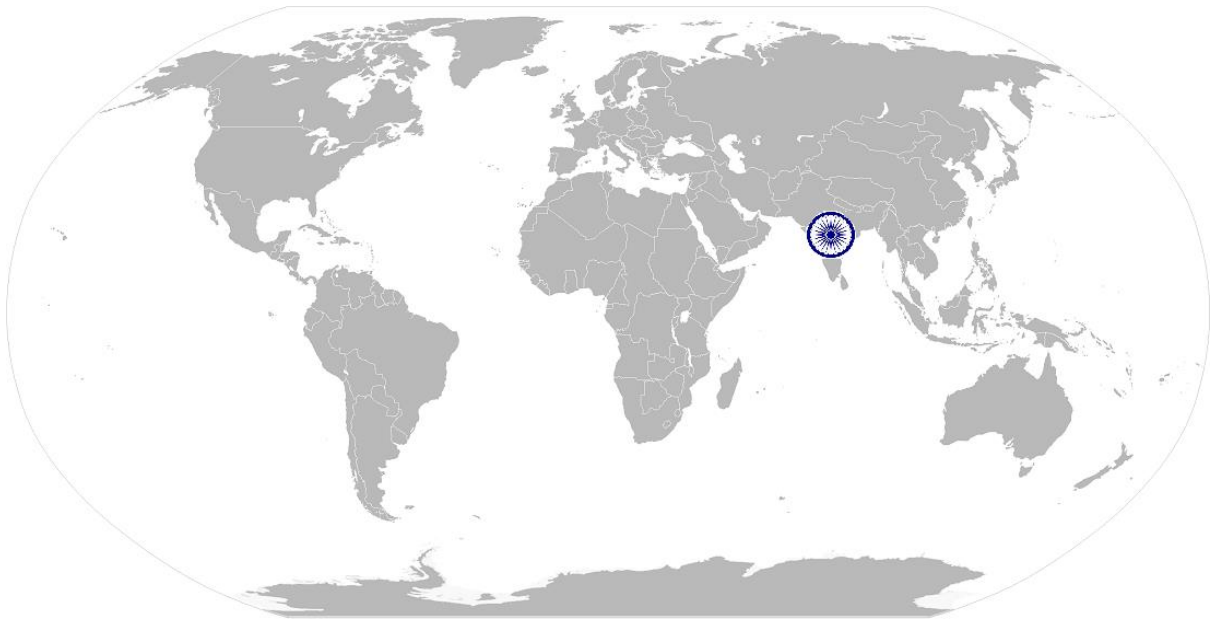
**Personal Attributes:** The job requires the individual to be capable of: understanding design concepts and techniques; being creative; suggesting design changes; giving attention to details. The individual must have good eyesight; ability to present and explain designs; and be able to work in a process driven team.

Job Details

Qualifications Pack Code	G&J/Q2303		
Job Role	Designer - CAD		
Credits(NVEQF/NVQF/NSQF)	TBD	Version number	1.0
Sector	Gems & Jewellery	Drafted on	29/05/13
Sub-sector	Cast and Diamond-set Jewellery	Last reviewed on	11/07/13
Occupation	Designing & Product Development	Next review date	15/07/15

Job Role	Designer - CAD
Role Description	Producing 3-dimensional (3D) CAD drawings of jewellery which are practical; and providing information such as detailing, size, shape, and weight for jewellery pieces to be manufactured
NVEQF/NVQF level	4
Minimum Educational Qualifications	Minimum: 12 <sup>th</sup> standard passed
Maximum Educational Qualifications	
Training	Computer operations
Experience	Not applicable
Applicable National Occupational Standards (NOS)	<p><b>Compulsory:</b></p> <ol style="list-style-type: none"> <li><a href="#">G&amp;J/N2303 Create jewellery designs using CAD</a></li> <li><a href="#">G&amp;J/N9901 Respect and maintain IPR</a></li> <li><a href="#">G&amp;J/N9902 Coordinate with others</a></li> <li><a href="#">G&amp;J/N9905 Maintain occupational health and safety</a></li> </ol> <p><b>Optional:</b> Not applicable</p>
Performance Criteria	As described in the relevant OS units

# National Occupational Standard



## Overview

This unit is about producing 3D CAD drawings of the jewellery to be made. The drawings must cater to different jewellery types and be practical for making. They serve as the blueprint for detailing and dimensions in the subsequent production process.

**G&J/N2303**

**Create jewellery designs using CAD**

National Occupational Standard

Unit Code	G&J /N2303
Unit Title (Task)	Create jewellery design using CAD
Description	This OS unit is about producing 3D CAD drawing which are practical; and providing the detailing and dimensions for jewellery pieces to be manufactured
Scope	<p>This unit/task covers the following:</p> <p>Receive the design concepts and instructions from different sources:</p> <ul style="list-style-type: none"> <li>collect 2-dimensional (2D) or hand sketch designs from product development head</li> <li>assimilate design concepts from merchandiser or marketing department or product development head</li> <li>check design concepts from various jewellery design publications, exhibitions, internet, websites of prominent jewellery companies, etc.</li> </ul> <p>Create 3D jewellery designs using CAD software:</p> <ul style="list-style-type: none"> <li>read 2D hand-sketch designs and blueprints in terms of size, dimensions, shapes, materials</li> <li>run CAD software for design</li> <li>highlight different textures and surface enhancement techniques in the jewellery design, e.g., mill graining</li> <li>prepare designs considering cut and shape of diamond/stone</li> <li>create a 3DCAD graphic showing rendering views of the object from different positions, which gives impression of virtual jewellery piece</li> <li>provide detailed information related to: the item to be made, overall dimensions, notes on material choice (e.g., gold weight), diamonds and/or gemstones to be used (e.g., numbers, sizes, types), and proposed manufacturing specifications</li> </ul> <p>Return prepared CAD designs to merchandiser and/or product development head:</p> <ul style="list-style-type: none"> <li>self-check each design in terms of dimensions, clarity and practicality</li> <li>make timely delivery of the required number of approved designs</li> </ul> <p>Data management:</p> <ul style="list-style-type: none"> <li>store or save files and folders</li> <li>transfer design data to cam system operator after approval from merchandiser and/or product development head</li> </ul> <p>Report problems related to:</p> <ul style="list-style-type: none"> <li>complexity of designs</li> <li>problems with faulty equipment or software operation and report them to the appropriate person</li> <li>errors on any CAD designs made, and take appropriate action if errors are found</li> <li>reasons for anticipated delays that may adversely affect delivery</li> </ul> <p>Interact with superior to:</p> <ul style="list-style-type: none"> <li>receive instructions and feedback from merchandiser and/or product</li> </ul>

**G&J/N2303**

**Create jewellery designs using CAD**

development head, marketing, master model maker and production manager

**Performance Criteria(PC) w.r.t. the Scope**

Element	Performance Criteria
<b>Using CAD tools to produce a range of 3D jewellery designs</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. select appropriate software tools</p> <p>PC2. make effective use of images, diagrams, repeat patterns, signs, symbols, etc.</p> <p>PC3. accurately delineate the design developments showing cut and shape of diamond or gemstones</p> <p>PC4. accurately highlight with specific colours, showing isometric projection, orthographic projection, scaling, dimensioning (e.g., prong thickness, prong height, gap between prongs and gap between diamonds, making seat and hole for the diamond etc.)</p> <p>PC5. make notes relating to materials and production (e.g., shrinkage parameter)</p> <p>PC6. accurately create different views of the object in different positions</p> <p>PC7. give clear views for all the different positions from different angles</p> <p>PC8. provide accurate and complete information related to design in terms of overall dimensions, material choice, diamond and stones and proposed manufacturing specifications</p>
<b>Productivity</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC9. make timely delivery of CAD jewellery designs to Computer Aided Machine (CAM) operator</p> <p>PC10. produce the number of CAD designs as per target given</p> <p>PC11. produce defect-free output with minimal setbacks</p>
<b>Quality of output</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC12. maintain practicality and look of the design as per the design concept</p> <p>PC13. produce well balanced designs based on inputs from marketing, product development and production department</p>
<b>Knowledge and Understanding (K)</b>	
<b>A. Organizational Context</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. company's policies on: quality, incentives, delivery standards, safety and hazards, integrity and IPR, and personnel management</p> <p>KA2. importance of the individual's role in the workflow</p> <p>KA3. reporting structure</p>
<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. how to use computers, CAD workstation software and hardware, compact digital camera, MSOffice, data management software, internet, etc.</p> <p>KB2. the tools and commands used for CAD</p> <p>KB3. remain well-informed about latest software and designing tools useful for jewellery designing</p>

**G&J/N2303**

**Create jewellery designs using CAD**

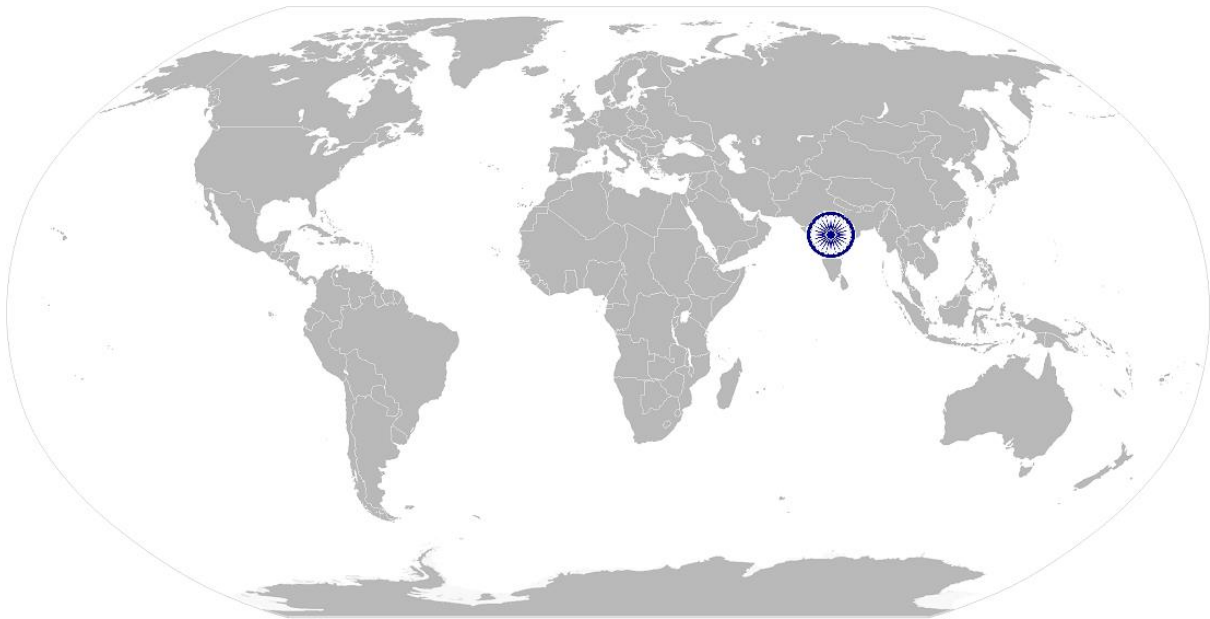
	<p>KB4. different textures, mill graining and cut-outs in the jewellery design</p> <p>KB5. different types of jewellery products rings, bracelets, pendants, necklace</p> <p>KB6. different types of diamonds and/or gemstones, colours, cuts, shapes and settings</p> <p>KB7. manufacturing drawing practices as per the company standards</p> <p>KB8. design techniques, tools, principals involved in production of precision designs, blueprints, drawings, and models</p>
<b>Skills (S) [Optional]</b>	
<b>A. Core Skills/ Generic Skills</b>	<b>Basic reading and writing skills</b>
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. read notes, designs and instructions in terms of design concepts</p> <p>SA2. read company rules and compliance documents required to complete the work</p> <p>SA3. read design and software related books</p>
	<b>Calculation and Geometry skills</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA4. count the number of diamonds and/or gemstones and assess the weight of precious metal and other materials required for the design to be converted into jewellery</p> <p>SA5. assess accuracy of dimensions and symmetry</p> <p>SA6. use basic calculations in design</p>
	<b>Teamwork</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA7. deliver the designs to next work process on time</p>
<b>B. Professional Skills</b>	<b>Creative thinking</b>
	<p>The user/individual on the job needs to know and understand:</p> <p>SB1. how to visualise designs</p> <p>SB2. how to translate design ideas or concepts to 3d designs</p>
	<b>Computer and Software skills</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB3. operate computer, scanner, etc.</p> <p>SB4. work on cad software</p> <p>SB5. manage and secure data</p>
	<b>Measuring and Calibrating skills</b>
	<p>The user/individual on the job needs to know and understand how:</p> <p>SB6. to use the measuring tools such as vernier callipers, scale, etc.</p>
	<b>Reflective thinking</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB7. produce successful CAD designs</p> <p>SB8. improve work processes for greater productivity</p>



**G&J/N2303**

**Create jewellery designs using CAD**

	SB9. pre-empt design related issues in the production and reporting it to merchandiser and/or production development head
	<b>Critical thinking</b>
	The user/individual on the job needs to know and understand how to: SB10. make necessary design changes for practicality and maintain aesthetics of the jewellery design

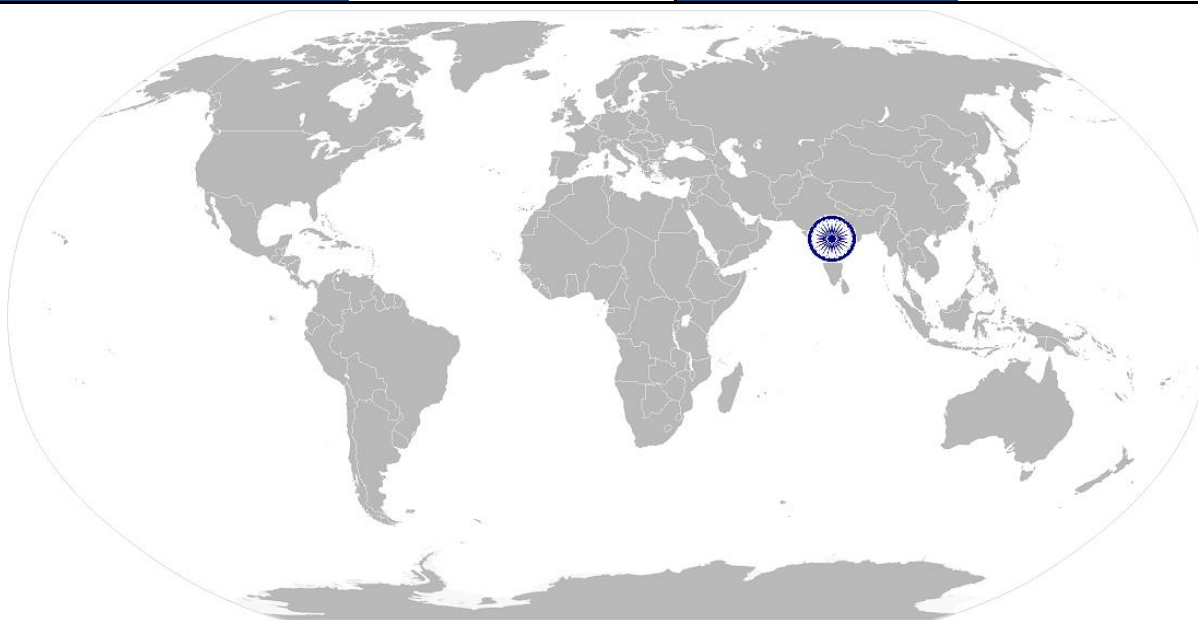


**G&J/N2303**

**Create jewellery designs using CAD**

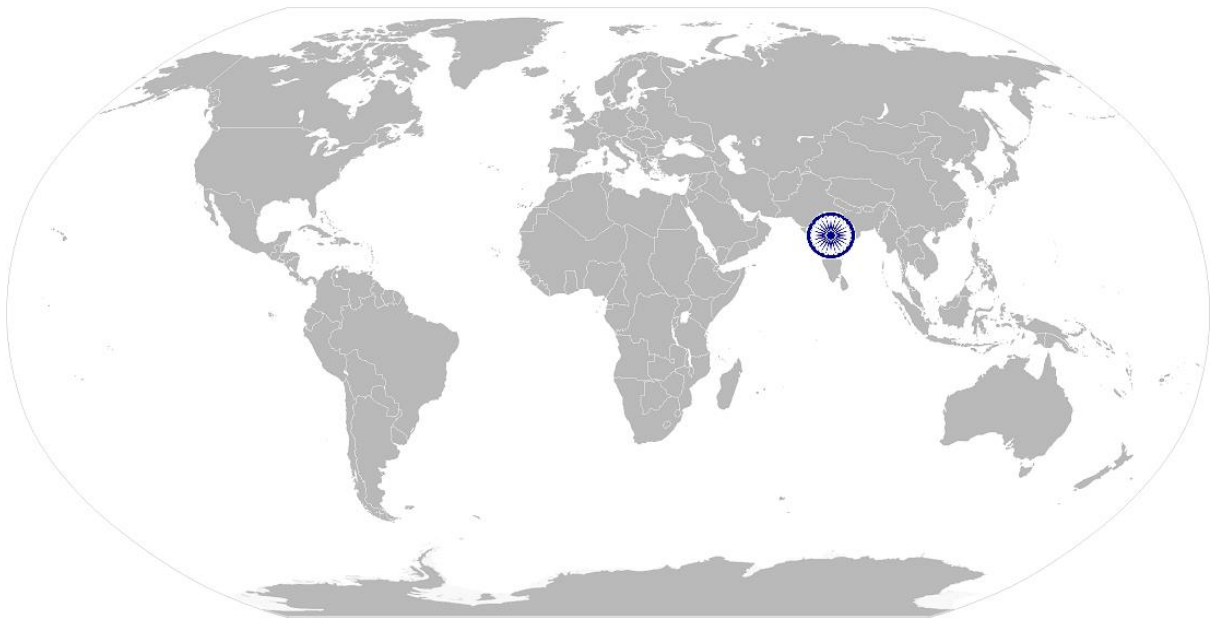
## **NOS Version Control**

NOS Code	G&J/N2303		
Credits(NVEQF/NVQF/NSQF)	TBD	Version number	1.0
Industry	Gems & Jewellery	Drafted on	29/05/13
Industry Sub-sector	Cast and Diamond-set Jewellery	Last reviewed on	11/07/13
Occupation	Designing and product development	Next review date	15/06/15





# National Occupational Standard



## Overview

This unit is about respecting intellectual property rights of the company's products and designs as well as avoiding infringement on IPR of other companies.

**G&J/N9901**

**Respect and maintain IPR**

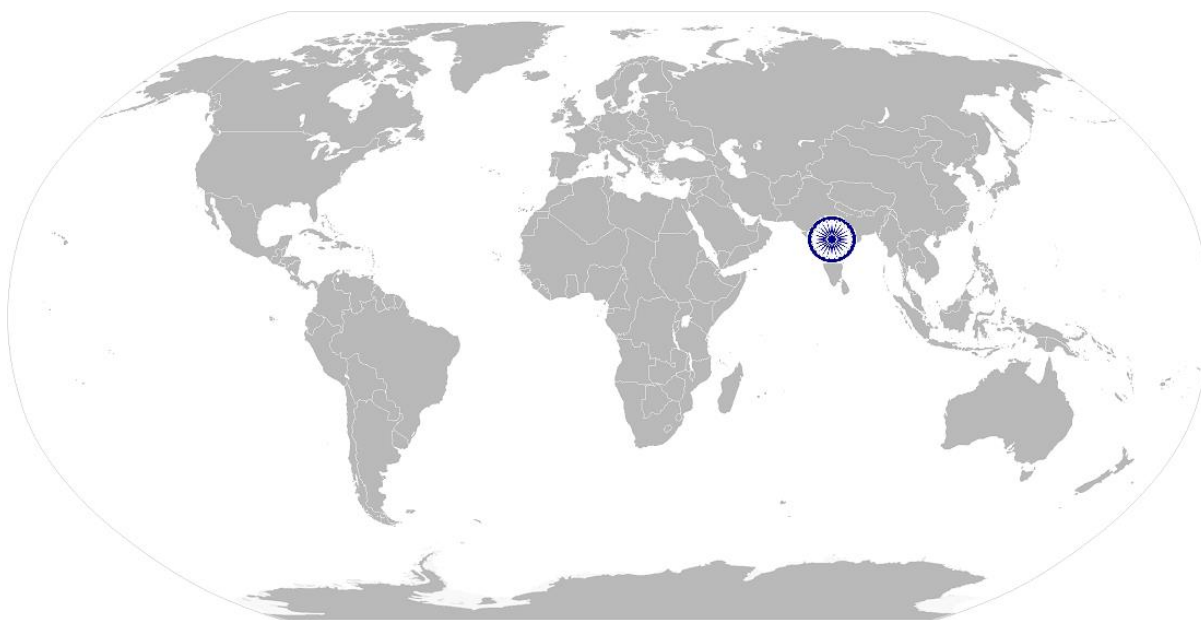
National Occupational Standard

<b>Unit Code</b>	<b>G&amp;J/N9901</b>
<b>Unit Title (Task)</b>	<b>Maintain IPR of company and respect IPR of other companies</b>
<b>Description</b>	This OS unit is about protecting company's IPR and avoiding infringement to IPR of other companies
<b>Scope</b>	<p>This unit/task covers the following:</p> <p>Protect company's Intellectual Property Rights (IPR)</p> <ul style="list-style-type: none"> <li>prevent leak of new designs to competitors by reporting on time</li> <li>be aware of any of company's product or design patents</li> <li>report IPR violations observed in the market, to supervisor or company heads</li> </ul> <p>Avoid infringement to IPR of other companies</p> <ul style="list-style-type: none"> <li>read copyright clause of the material published on the internet and any other printed material</li> <li>consult supervisor or senior management when in doubt about using publicly available information</li> <li>report any infringement observed in the company</li> </ul>
<b>Performance Criteria(PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Respecting and Maintaining IPR</b>	<p>To be competent, the user/individual on the job must:</p> <p>PC1. be able to spot plagiarism and report</p> <p>PC2. be aware of patents and IPR</p> <p>PC3. not be involved in IPR violations</p>
<b>Knowledge and Understanding (K)</b>	
<b>C. Organizational Context</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. company's policies on IPR and plagiarism</p> <p>KA2. reporting structure</p> <p>KA3. company's unique product range</p>
<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. patents and IPR laws</p> <p>KB2. how IPR protection is important for competitiveness of a company</p>
<b>Skills (S) [Optional]</b>	
<b>C. Core Skills/ Generic Skills</b>	<b>Communication skills</b>
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. effectively communicate any observed IPR violations or order leaks</p>
<b>D. Professional Skills</b>	<b>Decision making</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA2. report potential sources of violations</p>

**G&J/N9901**

**Respect and maintain IPR**

	<b>Reflective thinking</b>
	The user/individual on the job needs to know and understand to: SA3. learn from past mistakes and report IPR violations on time
	<b>Critical thinking</b>
	The user/individual on the job needs to know and understand how to: SA4. spot signs of violations and alert authorities in time

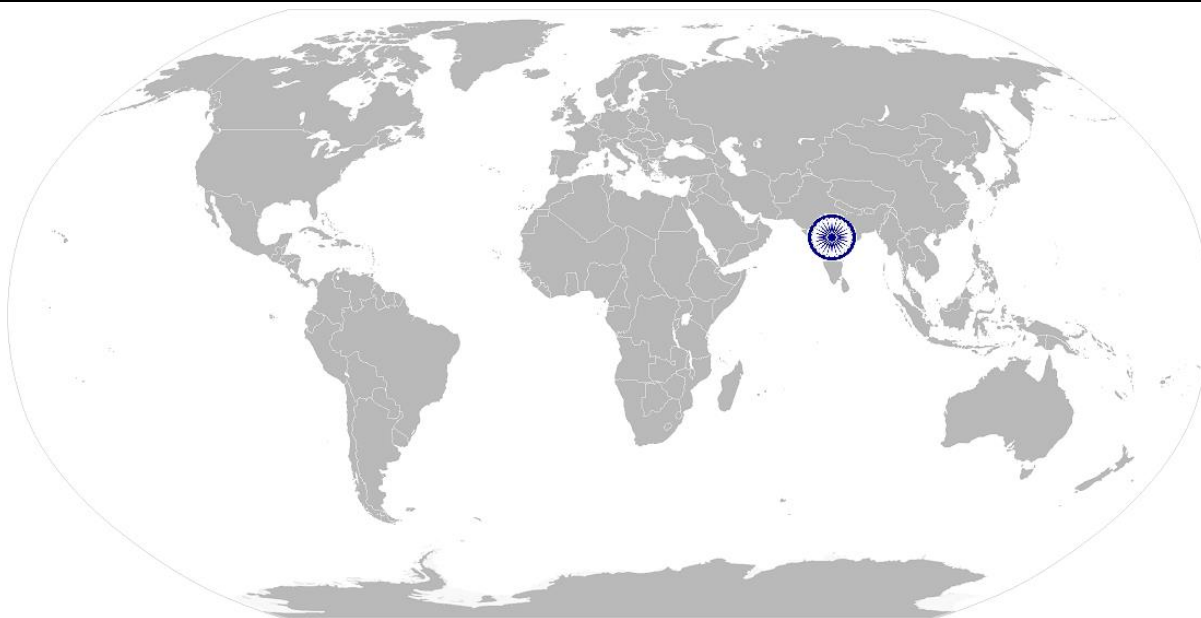


**G&J/N9901**

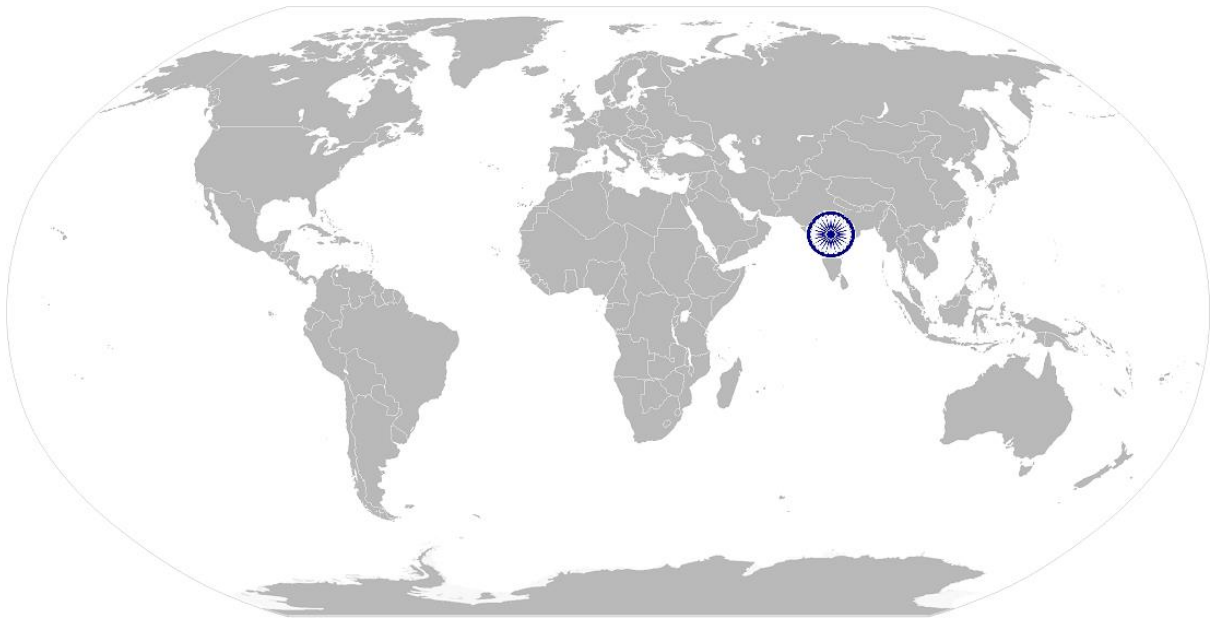
**Respect and maintain IPR**

## **NOS Version Control**

NOS Code	G&J/N9901		
Credits(NVEQF/NVQF/NSQF)	TBD	Version number	1.0
Industry	Gems & Jewellery	Drafted on	29/05/13
Industry Sub-sector	Cast and Diamond-set Jewellery	Last reviewed on	11/07/13
		Next review date	15/06/15



# National Occupational Standard



## Overview

This unit is about 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 deliverables on schedule.

**G&J/N9902**

**Coordinate with others**

National Occupational Standard

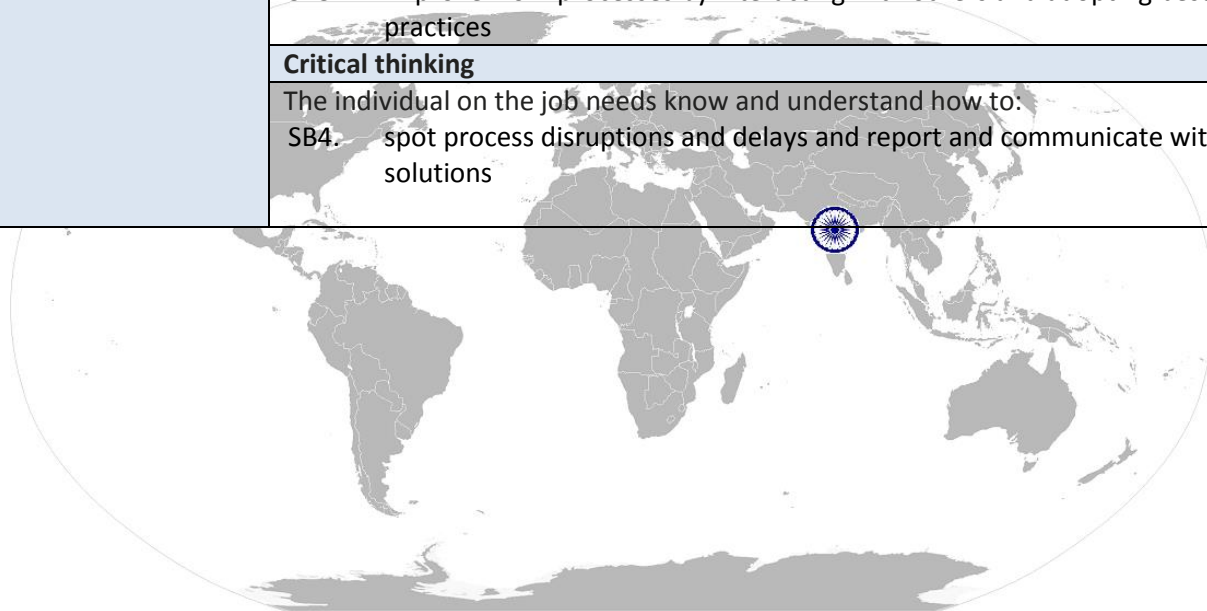
<b>Unit Code</b>	<b>G&amp;J/N9902</b>
<b>Unit Title (Task)</b>	<b>Interact with colleagues and seniors</b>
<b>Description</b>	This OS unit is about communicating with colleagues and seniors in order to achieve smooth and hazard-free work flow
<b>Scope</b>	<p>This unit/task covers the following:</p> <p>Interact with supervisor</p> <ul style="list-style-type: none"> <li>• receive work instructions and raw materials from reporting supervisor</li> <li>• communicate to reporting supervisor about process-flow improvements, product defects received from previous process, repairs and maintenance of tools and machinery as required</li> <li>• communicate any potential hazards or expected process disruptions</li> <li>• handover completed work to supervisor</li> </ul> <p>Interact with colleagues within and outside the department</p> <ul style="list-style-type: none"> <li>• work as a team with colleagues and share work as per their or own work load and skills</li> <li>• work with colleagues of other departments</li> <li>• communicate and discuss work flow related difficulties in order to find solutions with mutual agreement</li> <li>• receive feedback from qc and rework in order to complete work on time</li> </ul>
<b>Performance Criteria(PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Interaction with supervisor</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. understand the work output requirements</p> <p>PC2. comply with company policy and rule</p> <p>PC3. deliver quality work on time as required by reporting any anticipated reasons for delays</p>
<b>Interactions with colleagues and other departments</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC4. put team over individual goals</p> <p>PC5. be able to resolve conflicts</p> <p>PC6. learn how to multi-task relevant activities</p>
<b>Knowledge and Understanding (K)</b>	
<b>A. Organizational Context</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. company's policies on: preferred language of communication, reporting and escalation policy, quality delivery standards, and personnel management</p> <p>KA2. reporting structure</p>
<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to know and understand how to:</p> <p>KB1. communicate effectively</p> <p>KB2. build team coordination</p>



**G&J/N9902**

**Coordinate with others**

Skills (S) [Optional]	
<b>A. Core Skills/ Generic Skills</b>	<b>Communication skills</b>
	<p>The individual on the job needs to know and understand how to:</p> <p>SA1. read and write preferred language of communication as prescribed by the company</p> <p>SA2. read job sheets and interpret technical details mentioned in the job sheet</p>
<b>B. Professional Skills</b>	<b>Decision making</b>
	<p>The individual on the job needs to know and understand:</p> <p>SB1. how to spot and communicate potential areas of disruptions to work process and report the same</p> <p>SB2. when to report to supervisor and when to deal with a colleague individually, depending on the type of concern</p>
	<b>Reflective thinking</b>
	<p>The individual on the job needs to know and understand how to:</p> <p>SB3. improve work processes by interacting with others and adopting best practices</p>
	<b>Critical thinking</b>
	<p>The individual on the job needs know and understand how to:</p> <p>SB4. spot process disruptions and delays and report and communicate with solutions</p>

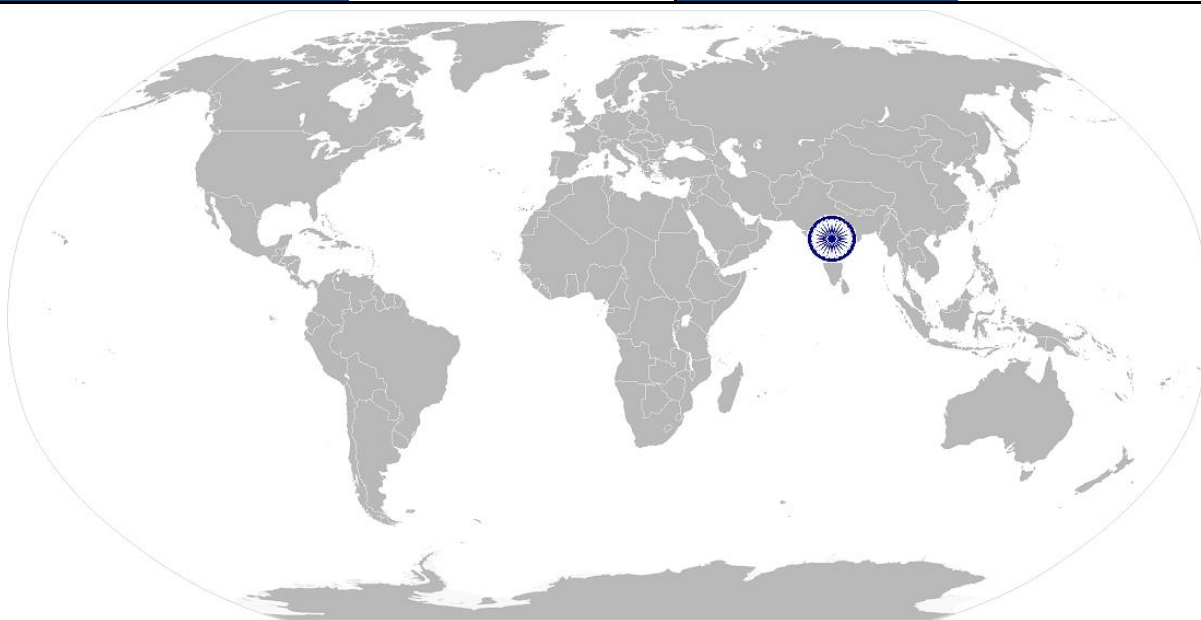


**G&J/N9902**

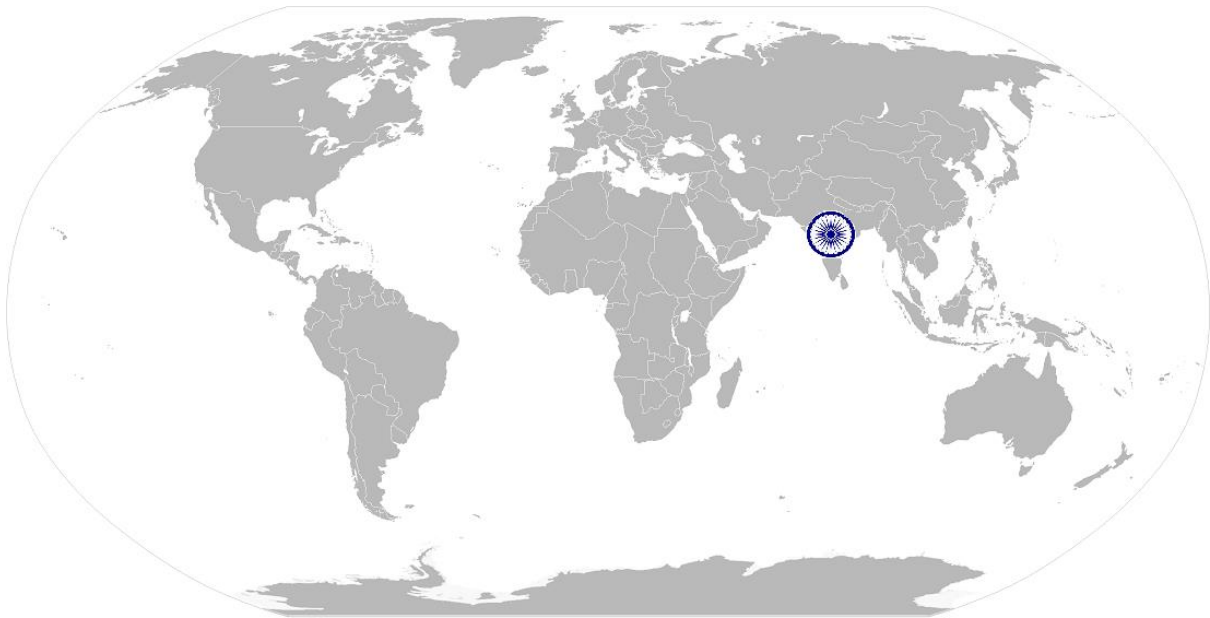
**Coordinate with others**

## **NOS Version Control**

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Industry Sub-sector	Cast and diamond-set jewellery	Last reviewed on	11/07/13
		Next review date	15/06/15



# National Occupational Standard



## Overview

This unit is about 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 occupational health and safety.

**G&J/N9905**

**Maintain occupational health and safety**

National Occupational Standard

Unit Code	G&J/N9905
Unit Title (Task)	Maintain occupational health and safety
Description	This OS unit is about being aware of, communicating and taking steps towards minimizing potential hazards and dangers of accidents on the job and maintaining occupational health and safety
Scope	<p>This unit/task covers the following:</p> <p>Understand potential sources of accidents</p> <ul style="list-style-type: none"> <li>to avoid accidents related to use of potentially dangerous chemicals, sharp tools and machines</li> </ul> <p>Use safety gear to avoid accidents</p> <ul style="list-style-type: none"> <li>wear safety gear such as goggles, mask, gloves, ear plugs</li> </ul> <p>Actively participate in the health and safety awareness campaigns</p> <ul style="list-style-type: none"> <li>attend fire drills organised by the company or industrial zone</li> <li>learn first aid procedure</li> <li>be alert about designated assembly area in the event of an emergency</li> <li>read and understand the evacuation and emergency procedures</li> </ul> <p>Communicate to reporting supervisor about:</p> <ul style="list-style-type: none"> <li>process flow improvements that can reduce anticipated or repetitive hazards</li> <li>mishandling of tools, machines or hazardous materials</li> <li>electrical problems that could result in accident</li> </ul>
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
<b>Communicating potential accident points</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. spot and report potential hazards on time</p> <p>PC2. follow company policy and rules regarding use of hazardous materials</p> <p>PC3. attend and actively participate in the health and safety campaigns organised by the company</p>
<b>Using safety gear</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC4. use or wear safety gear as per the rules of the company</p>
Knowledge and Understanding (K)	
<b>A. Organizational Context</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. company's policies on: safety and hazards and personnel management</p> <p>KA2. reporting structure</p>
<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. how different chemicals react and what could be the danger from them</p> <p>KB2. how to use machines and tools without suffering bodily harm</p>

**G&J/N9905**

**Maintain occupational health and safety**

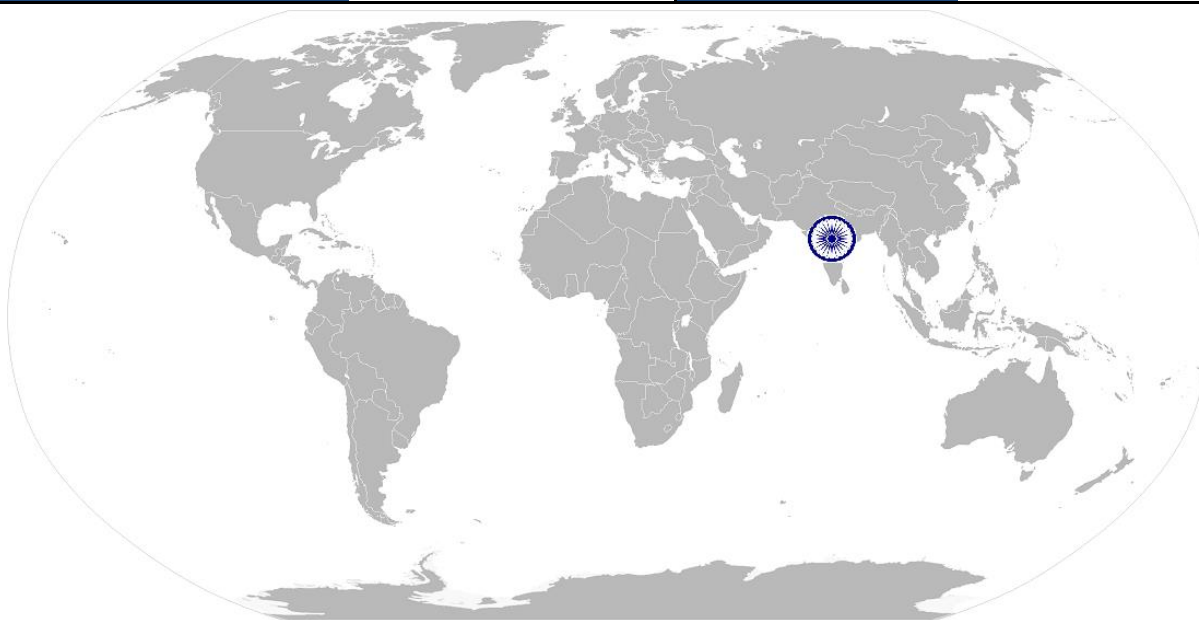
<b>Skills (S) [Optional]</b>	
<b>A. Core Skills/ Generic Skills</b>	<b>Communication skills</b>
	The individual on the job needs to know and understand how to: SA1. effectively communicate the danger
	<b>Organising skills</b>
	The individual on the job needs to know and understand how to: SA2. keep all the tools in an organised manner so as to avoid accidents SA3. keep the work environment safe and clean
<b>B. Professional Skills</b>	<b>Decision making</b>
	The individual on the job needs to know and understand how to: SB1. report potential sources of danger SB2. follow prescribed procedure in the event of an accident SB3. wear appropriate safety gear to avoid an accident
	<b>Reflective thinking</b>
	The individual on the job needs to know and understand to: SB4. learn from past mistakes regarding use of hazardous machines or chemicals
	<b>Critical thinking</b>
	The individual on the job needs to know and understand how to: SB5. spot danger
	<b>Decision making</b>
	The individual on the job needs to know and understand how to: SB6. report potential sources of danger SB7. follow prescribed procedure in the event of an accident SB8. wear appropriate safety gear to avoid an accident

**G&J/N9905**

**Maintain occupational health and safety**

## **NOS Version Control**

NOS Code	G&J/N9905		
Credits(NVEQF/NVQF/NSQF)	TBD	Version number	1.0
Industry	Gems & Jewellery	Drafted on	29/05/13
Industry Sub-sector	Cast and diamond-set jewellery	Last reviewed on	11/07/13
		Next review date	15/06/15





Definitions

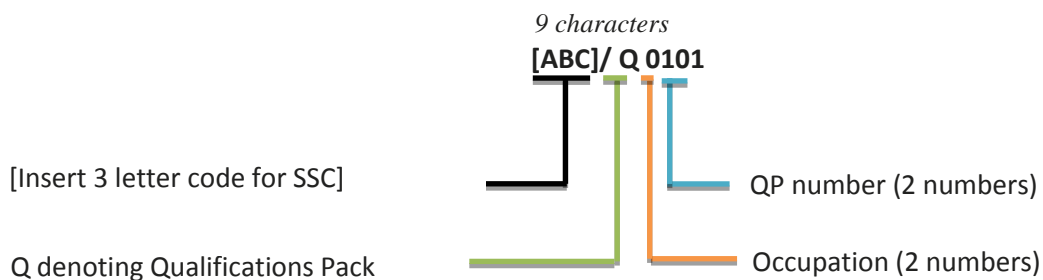
Keywords /Terms	Description
Sector	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further 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.
Function	Function is an activity necessary for achieving the key purpose of the sector, occupation, or an area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of OS.
Sub-function	Sub-functions are sub-activities essential to fulfil the achieving the objectives of the function.
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 they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria	Performance criteria are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (OS)	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	Knowledge and understanding 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	Core skills or generic skills 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.
Keywords /Terms	Description
CAD	Computer Aided Design
CAM	Computer Aided Manufacturing
IPR	Intellectual Property Rights
NOS	National Occupational Standard(s)
NVQF	National Vocational Qualifications Framework
NSQF	National Qualifications Framework
NVEQF	National Vocational Education Qualifications Framework
QP	Qualifications Pack

## Annexure

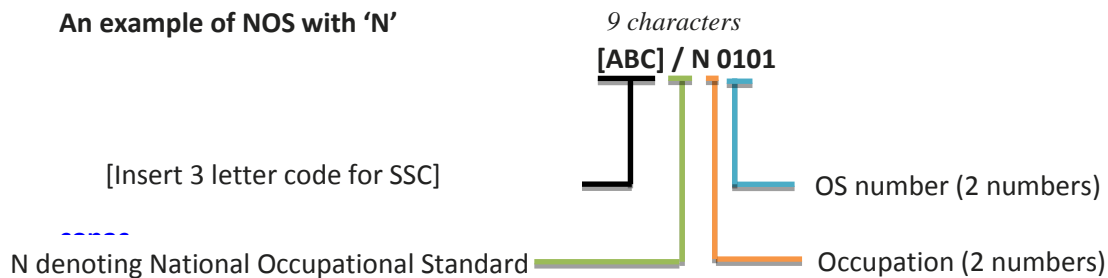
### Nomenclature for QP and NOS

#### Qualifications Pack



#### Occupational Standard

##### An example of NOS with 'N'



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The following acronyms/codes have been used in the nomenclature above:

Sub-sector	Range of Occupation numbers
Handmade gold and gems-set jewellery	01-20
Cast and diamond-set jewellery	21-40
Diamond processing	41-60
Gemstone processing	61-80
Jewellery retailing	81-98

Sequence	Description	Example
Three letters	Industry name	G&J
Slash	/	/
Next letter	Whether <b>QP</b> or <b>NOS</b>	N
Next two numbers	Occupation code	01
Next two numbers	OS number	01

## **CRITERIA FOR ASSESSMENT OF TRAINEES**

**Job Role** CAD Designer

**Qualification Pack** G&J/Q2303

**Sector Skill Council** Gem & Jewellery

### **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 of 50% in theory and 70% in practical to successfully clear the assessment.
6. In case of successfully passing only certain number of NOS's, the candidate is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.

		Marks Allocation			
		Total Marks (80+20)	Out Of	Theory	Skills Practical
1.G&J/N2303 (Create jewellery designs using CAD)	PC1. select appropriate software tools	<b>75</b>	3	0	3
	PC2. make effective use of images, diagrams, repeat patterns, signs, symbols, etc.		5	1	4
	PC3. accurately delineate the design developments showing cut and shape of diamond or gemstones		5	0	5

	PC4. accurately highlight with specific colours, showing isometric projection, orthographic projection, scaling, dimensioning (e.g., prong thickness, prong height, gap between prongs and gap between diamonds, making seat and hole for the diamond etc.)	15	5	10
	PC5. make notes relating to materials and production (e.g., shrinkage parameter)	4	0	4
	PC6. accurately create different views of the object in different positions	5	0	5
	PC7. give clear views for all the different positions from different angles	5	0	5
	PC8. provide accurate and complete information related to design in terms of overall dimensions, material choice, diamond and stones and proposed manufacturing specifications	9	2	7
	PC9. make timely delivery of CAD jewellery designs to Computer Aided Machine (CAM) operator	4	1	3
	PC10. produce the number of CAD designs as per target given	3	0	3
	PC11. produce defect-free output with minimal setbacks	4	0	4
	PC12. maintain practicality and look of the design as per the design concept	8	1	7



	PC13. produce well balanced designs based on inputs from marketing, product development and production department		5	0	5
		<b>Total</b>	<b>75</b>	<b>10</b>	<b>65</b>
2. G&J/N9901 Respect and maintain IPR	PC1. be able to spot plagiarism and report	<b>9</b>	3	2	1
	PC2. be aware of patents and IPR		4	1	3
	PC3. not be involved in IPR violations		2	1	1
		<b>Total</b>	<b>9</b>	<b>4</b>	<b>5</b>
3. G&J/N9902 Coordinate with other	PC1. understand the work output requirements	<b>8</b>	2	1	1
	PC2. comply with company policy and rule		1	0	1
	PC3. deliver quality work on time as required by reporting any anticipated reasons for delays		1	0	1
	PC4. put team over individual goals		1	1	0
	PC5. be able to resolve conflicts		1	0	1
	PC6. learn how to multi-task relevant activities		2	1	1
		<b>Total</b>	<b>8</b>	<b>3</b>	<b>5</b>
4. G&J/N9905 Maintain occupational health and safety	PC1. spot and report potential hazards on time	<b>8</b>	2	1	1
	PC2. follow company policy and rules regarding use of hazardous materials		2	0	2
	PC3. attend and actively participate in the health and safety campaigns organised by the company		2	1	1
	PC4. use or wear safety gear as per the rules of the company		2	1	1
		<b>Total</b>	<b>8</b>	<b>3</b>	<b>5</b>