

QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR GEMS & JEWELLERY INDUSTRY



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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-Goldsmith: Chettinadu Jewellery

SECTOR: GEMS & JEWELLERY

SUB-SECTOR: Handmade gold and gems-set jewellery

OCCUPATION: Gold smithy (Specialised)

REFERENCE ID: G&J/Q0904

ALIGNED TO: NCO-2004/7313.28

Goldsmith-Chettinadu Jewellery: The Chettinadu Jewellery Goldsmith makes heavy as well as traditional gold jewellery such as 'Thali' using pure gold and alloys, and sets gemstones in close-set style.

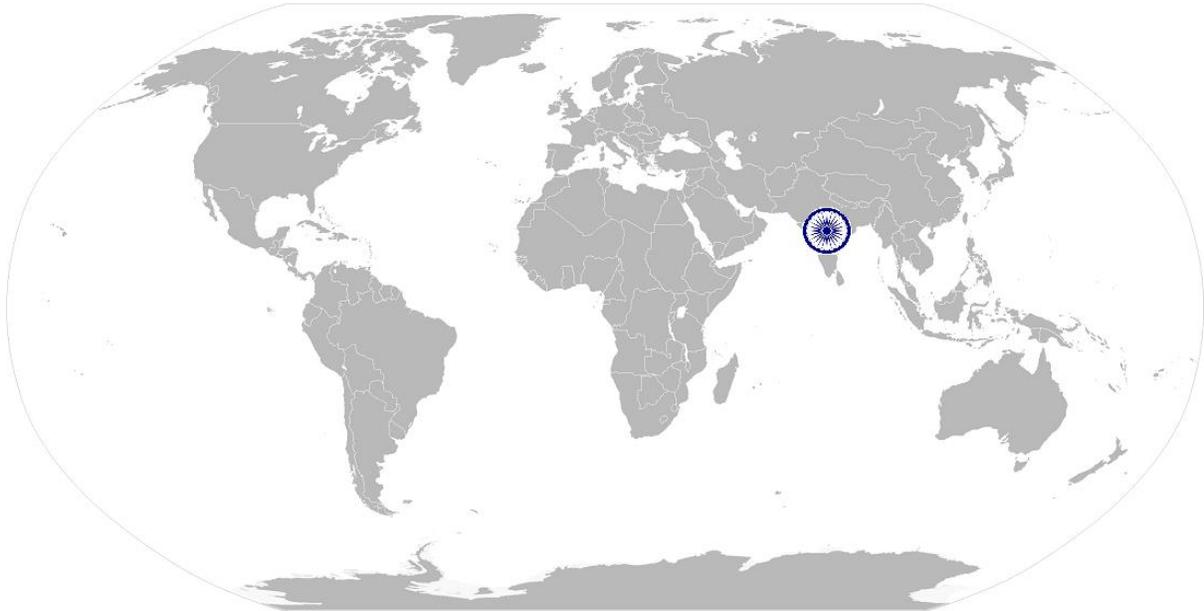
Brief Job Description: The individual works with hand and machine tools and using gold and polished gemstones to create traditional and heavy Chettinadu jewellery, mostly acquired for investment or specific rituals.

Personal Attributes: The job requires the individual to have: aptitude for design; attention to details; good eyesight; steady hands; strong physique; ability to work for long hours in sitting position; and a lot of patience. The individual must also be able to use reflective skills in order to develop improved designs and work processes.

Job Details	Qualifications Pack Code	G&J/Q0904		
	Job Role	Goldsmith – Chettinadu Jewellery		
	Credits(NSQF)	TBD	Version number	1.0
	Sector	Gems & Jewellery	Drafted on	23/08/13
	Sub-sector	Handmade and Gems-set Jewellery	Last reviewed on	13/08/14
	Occupation	Gold smithy (Specialised)	Next review date	11/08/15

Job Role	Goldsmith – Chettinadu Jewellery
Role Description	Making components from pure gold or alloy for usually heavy ‘Chettinadu’ jewellery and using close-set technique for gemstones setting, while preserving the traditional
NVEQF/NVQF level	4
Minimum Educational Qualifications	Preferably 10 th Standard passed
Maximum Educational Qualifications	
Training	Not Applicable
Experience	Preferably 3 years as components maker, i.e., Goldsmith (basic)
Applicable National Occupational Standards (NOS)	<p>Compulsory:</p> <ol style="list-style-type: none"> G&J/N0901 Make components for Chettinadu jewellery G&J/N0804 Set gemstones using close-setting technique G&J/N9910 Maintain IPR and respect copyright G&J/N9912 Coordinate with co-workers G&J/N9914 Maintain safe work environment <p>Optional: Not applicable</p>
Performance Criteria	As described in the relevant OS units

National Occupational Standard



Overview

This unit is about making the different jewellery components by hand and linking them to form the frame of Chettinadu jewellery style, which is typically heavier than other precious-metal jewellery. It also includes making unique components such as 'Thali', which is specific to the traditional Chettinadu jewellery style.

G&J/N0901

Make components for Chettinadu jewellery

National Occupational Standard

Unit Code	G&J/N0901
Unit Title (Task)	Make components for Chettinadu Jewellery
Description	This OS unit is about making different components required for making traditional Chettinadu style of jewellery
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Order precious metal or alloy for making components • Draw wire, strip or sheet • Anneal the wire or strip or sheet for malleability while drawing or rolling • Make components • Make components by stamping the gold sheet • Make the frame • File the frame components for finishing • Control precious metal loss • Detect product defects and return completed wire to supervisor • Report problems
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Making components and frame	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. understand specifications in terms of required components, e.g., wires or chains, sheets</p> <p>PC2. assess the required quantity, size and weight of components for a heavy Chettinad style jewellery, e.g., no of rings for a heavy chain</p> <p>PC3. understand the dimensions and thickness requirement for each component</p> <p>PC4. assess quantity of precious metal or alloy required for making the components</p> <p>PC5. roll metal to the appropriate thickness using wire drawing or rolling machine</p> <p>PC6. sharpen one end of the metal to ease the pass through of the metal in draw-plate hole</p> <p>PC7. push the metal through the draw-plate hole and then pull out</p> <p>PC8. repeat the process through consecutive holes to get the required thickness of wire</p> <p>PC9. pass metal through roller machine or mill to make into strips or sheet of appropriate thickness</p> <p>PC10. ensure uniform thickness and weight while drawing wire for heavy jewellery</p> <p>PC11. treat the wire or strip with heat using gas torch or furnace</p> <p>PC12. set temperature according to the thickness of the wire or strip</p> <p>PC13. remove the wire or strip from heat and quench in water to cool immediately</p> <p>PC14. repeat the heating and cooling process after every drawing or rolling</p> <p>PC15. solder the ends to shape as a ring</p> <p>PC16. connect pieces of wire together to make the chain as per design using the</p>

G&J/N0901

Make components for Chettinadu jewellery

	<p>weaving or soldering method as specified</p> <p>PC17. to make ball, cut the sheet or strip as per the diameter of the ball</p> <p>PC18. create two hemispheres of the ball and lock and join them by heating</p> <p>PC19. understand the design and stamping requirements for Chettinadu jewellery</p> <p>PC20. assess number of similar components to be made as per design, e.g., different various shapes required for Thali (Kaluthiru jewellery)</p> <p>PC21. pick appropriate die of each component and fit it in the stamping machine</p> <p>PC22. insert the sheet or strip drawn in the die machine and stamp the specified design</p> <p>PC23. ensure required number of similar components and different components are stamped as per requirement</p> <p>PC24. make components of required dimensions such as size and thickness</p> <p>PC25. make components of required finish and evenness</p> <p>PC26. draw or roll metal without overdrawing or splitting or cracking</p> <p>PC27. anneal the wire, strips and sheets for required malleability for the thickness required</p> <p>PC28. make required number of different components as per design requirement of Chettinadu jewellery</p> <p>PC29. ensure that the rings are of uniform thickness and weight for making heavy and thicker chain jewellery</p> <p>PC30. assess the quantity and weight of different components required to make as per jewellery requirement</p> <p>PC31. check symmetry of design</p> <p>PC32. lay the components and frame pieces on wax or lac and set in Plaster of Paris (PoP) mixture or customised jigs</p> <p>PC33. solder components to link to form frame as per design</p> <p>PC34. remove PoP, level and strengthen joints in wax or lac</p> <p>PC35. send completed frame for cleaning with brush and water or chemical solution</p> <p>PC36. limit precious-metal loss of damaged metal rod or wire</p> <p>PC37. accurately link the ends to form even rings, collets or chains of required dimensions</p> <p>PC38. link, solder and file the components into frame of required finish and utility</p> <p>PC39. achieve required flexibility, utility and symmetry of frame as per design</p> <p>PC40. cut any sharp edges as per design</p> <p>PC41. file for smooth finish of joined periphery as per the design requirement</p> <p>PC42. file or grind outer surface for smoothness and required finish</p> <p>PC43. file for correct dimensions, e.g., length, bend, flexibility, colour, evenness, size and embellishments to be fitted</p> <p>PC44. meet productivity target</p> <p>PC45. complete work with minimum hazards and accidents</p>
<p>Controlling precious metal loss and checking quality</p>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC46. collect precious metal dust or fragments dispersed during the day</p> <p>PC47. tally account as per allowed standards for wire making</p> <p>PC48. conduct regular cleaning for collection of gold as per company policy</p> <p>PC49. identify the type of defect, e.g., damaged beyond repair</p> <p>PC50. handover defective components to supervisor for melting or use elsewhere</p> <p>PC51. rework on any quality check feedback and return</p>

G&J/N0901

Make components for Chettinadu jewellery

	PC52. ensure timely delivery
Reporting problems	To be competent, the user/individual on the job must be able to: PC53. report machine failure PC54. inform about tools shortage and their maintenance related issues PC55. identify and report reasons for anticipated delays that may adversely affect delivery PC56. report malfunction of annealing torch or furnace PC57. inform about poor quality of gold received PC58. deliver complete frames in time by reporting well in advance, any problems faced or anticipated
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	The individual on the job needs to know and understand: KA1. company's policies on: Acceptable limits of precious metal loss per product type; delivery timelines; safety and hazards; security; and personnel management KA2. work flow involved in company's jewellery manufacturing process, i.e., from one goldsmith to another KA3. importance of the individual's role in the workflow KA4. reporting structure
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. uses of different types of tools for wire-drawing, stamping and rolling such as ruler, draw plates, pliers, hammer, bench block, cup bur, cutter, roller machine KB2. properties of gold and gold alloy KB3. different types of wax or lac and their use KB4. different types of traditional Chettinad jewellery designs and their purpose KB5. different components of used in traditional Chettinadu jewellery KB6. procedure of making traditional components for Chettinadu jewellery, e.g., Thali components do not require linking by soldering KB7. precious-metal or gold alloy properties such as strength and malleability KB8. heat treatments and intensity effect with respect to different types of gold alloys KB9. potential work hazards, particularly, when using hand and machine tools
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	Basic reading and writing skills
	The user/individual on the job needs to know and understand how: SA1. to read notes and put notes on design
	Measuring skills
	The user/individual on the job needs to know and understand how: SA2. to assess the material requirement for making wires of specified length and thickness SA3. to use gauge check the thickness of wire SA4. to check symmetry of component made

G&J/N0901

Make components for Chettinadu jewellery

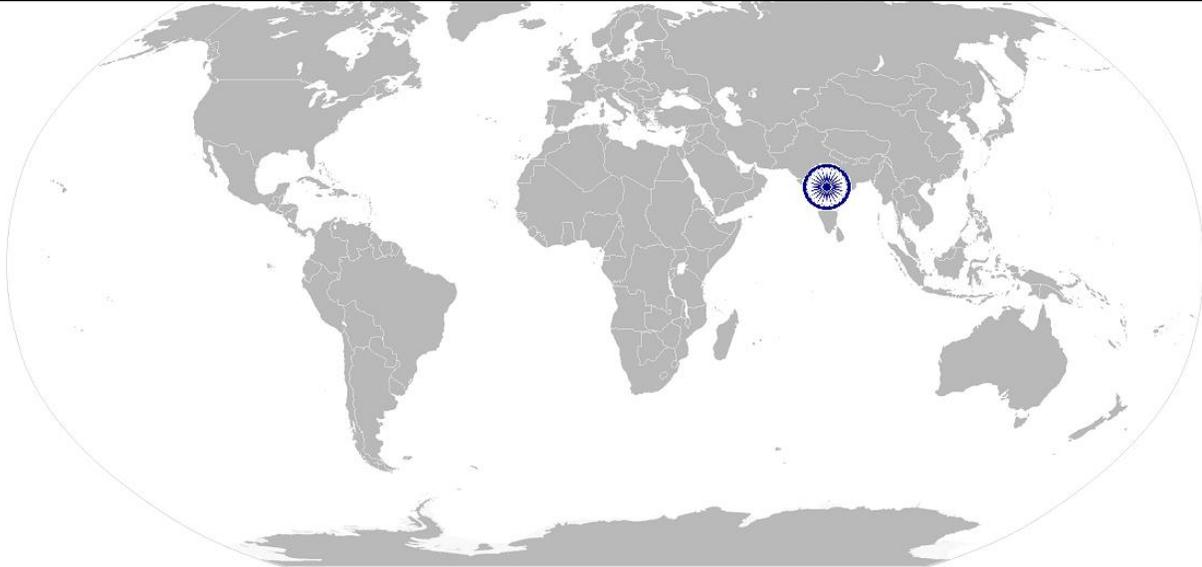
B. Professional Skills	Calculation skills
	The user/individual on the job needs to know and understand how: SA5. to assess the number of components required as per design SA6. to assess the weight and size requirement for each component e.g., number of rings and weight of each ring for making a heavy gold chain
	Using tools and machines
	The user/individual on the job needs to know and understand how: SB1. to use roller machine for drawing wire or strip SB2. to use tools for drawing wire such as: Gas torch or furnace for annealing wire or strip; drawing tongs and draw plate for thinning diameter of wire and required shape; wax or oil for lubrication SB3. to use tools such as files and pliers SB4. to use stamping machine for making components through readily available die SB5. to use the right hole in draw plate and at correct angle for achieving the finish as per design SB6. to maintain tools and machines used SB7. to use technology such as computer for visual aid and efficient working
	Reducing precious metal loss
	The user/individual on the job needs to know and understand: SB8. prescribed precious-metal loss for the entire jewellery piece SB9. Precious-metal loss applicable for the component SB10. how to reduce precious metal loss below the prescribed standards SB11. how to collect broken or over rolled pieces, account in job sheet and return SB12. how to follow company's policies on collecting gold dust and fragments SB13. how to suggest improvements in order to reduce precious metal loss limits
	Reflective thinking
	The user/individual on the job needs to know and understand how to: SB14. work in sitting or standing for long hours position with correct posture SB15. maintain clean work environment and organise tools for ease of use
	Critical thinking
	The user/individual on the job needs to know and understand how: SB16. to spot process disruptions and delays SB17. to avoid hazards when using roller machine or draw plate or during annealing

G&J/N0901

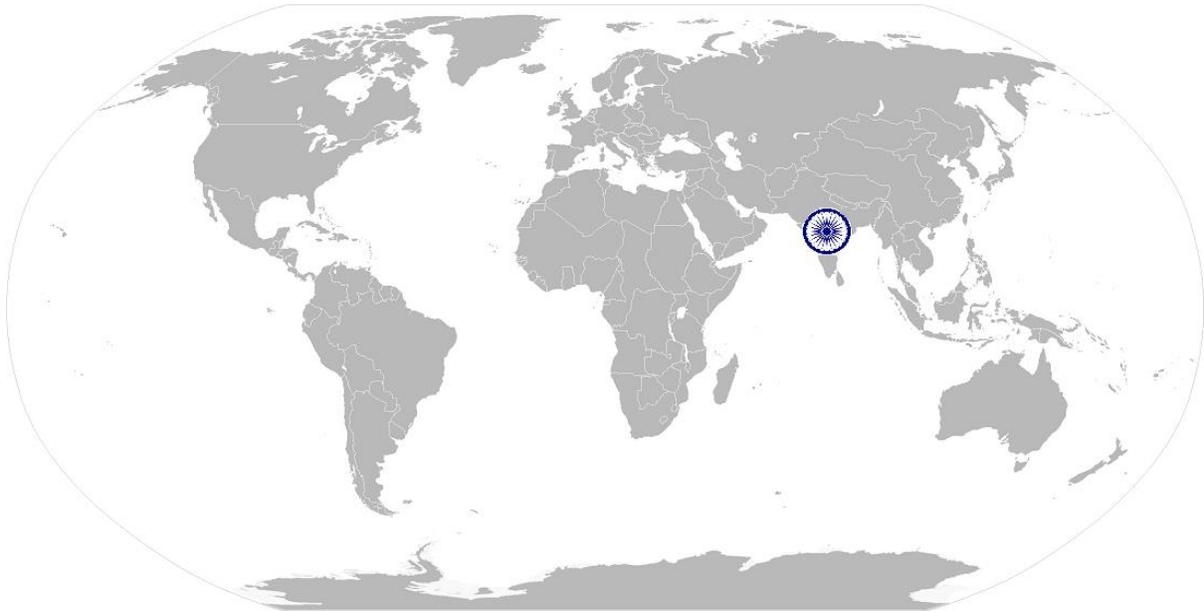
Make components for Chettinadu jewellery

NOS Version Control

NOS Code	G&J/N0901		
Credits(NSQF) [OPTIONAL]	TBD	Version number	1.0
Industry	Gems & Jewellery	Drafted on	23/08/13
Industry Sub-sector	Handmade Gold and Gems-set Jewellery	Last reviewed on	13/08/14
		Next review date	11/08/15



National Occupational Standard



Overview

This unit is about setting gemstones including diamonds in the jewellery, using close setting technique. This also includes closing the jewellery frame with gold sheet by soldering it to the lower side and then setting the gemstone.

G&J/N0804

Set gemstones using close-setting technique

National Occupational Standard

Unit Code	G&J/N0804
Unit Title (Task)	Set gemstones using closed setting technique
Description	This OS unit is about setting gemstone using close setting technique. i.e., closing the jewellery on one side with gold sheet and then setting the gemstones
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Receive sorted diamonds, gemstones and jewellery components for gemstone setting • Close the jewellery before setting • Set gemstone in the jewellery frame • File excess gold around gemstone set and ensure smooth finishing • Detect product defects and self-check quality • Report problems
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Closing the jewellery frame	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. receive the gemstones for setting</p> <p>PC2. understand different shapes, sizes and colour of stones</p> <p>PC3. match stones with design</p> <p>PC4. understand the close setting requirement in terms of shape and size and depth</p> <p>PC5. drill holes in the jewellery using drilling machine at an angle as per specification to hold the gemstones</p> <p>PC6. close the back side of the jewellery using a gold sheet by soldering, e.g., for bangle, the inner side is closed by covering by a gold sheet and soldering</p> <p>PC7. file or grind outer surface for smoothness and required finish</p> <p>PC8. file for correct dimensions and design , e.g., length, bend, flexibility, colour, evenness, size and embellishments to be fitted</p>
Gemstone setting	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC9. prepare the collet by etching the closed hole to the required depth and dimensions</p> <p>PC10. pick the gemstones using appropriate twisters or tongs for easy placement in the hole drilled</p> <p>PC11. place the gemstone in the hole and bezel it in to secure firmly</p> <p>PC12. repeat for other holes as per jewellery design</p> <p>PC13. file or cut sharp edges in jewellery</p> <p>PC14. grind for smooth surface on the surface after bezelling</p> <p>PC15. avoid over filing</p> <p>PC16. achieve flawless setting as per design requirement</p> <p>PC17. achieve even colour of stones set, i.e., no discolouration or breakage during setting</p> <p>PC18. set stones securely using bezelling</p>

G&J/N0804

Set gemstones using close-setting technique

	<p>PC19. avoid damage to the rest of the frame during the process of setting</p> <p>PC20. achieve productivity as per target</p> <p>PC21. complete work with minimum hazards and accidents</p>
Checking quality	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC22. inform supervisor if product has arrived with polishing, cleaning, filing or linking defect from previous processes</p> <p>PC23. understand the type of defect and send to relevant goldsmith</p> <p>PC24. check visually in for any defects such as loose stone, tilted setting, marks, blank spaces</p> <p>PC25. check weight and dimensions of jewellery as per design</p> <p>PC26. remove and re-set stone again if returned from QC achieve flawless setting as per design requirement</p>
Reporting problems	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC27. report tools shortage and their maintenance related issues</p> <p>PC28. identify and report reasons for anticipated delays that may adversely affect delivery</p> <p>PC29. deliver stones set jewellery in time by reporting problems faced or anticipated well in advance</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	<p>The individual on the job needs to know and understand:</p> <p>KA1. company's policies on: Acceptable limits of gold loss per product type; delivery timelines; safety and hazards; security; and personnel management</p> <p>KA2. work flow involved in company's jewellery manufacturing process (from one goldsmith to another)</p> <p>KA3. importance of the individual's role in the workflow</p> <p>KA4. reporting structure</p>
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. sorting similar shapes and size of stones as per design</p> <p>KB2. 4Cs, i.e., colour, cut, clarity and carat</p> <p>KB3. handmade jewellery making process</p> <p>KB4. types of soldering technique to close the jewellery on one side</p> <p>KB5. types of close set jewellery and setting techniques</p> <p>KB6. bezelling technique of gemstone setting and method of setting them securely in the jewellery</p> <p>KB7. uses of different types of tools and techniques for gemstone setting</p> <p>KB8. different types of gemstones and their characteristics</p> <p>KB9. different types of wax and their use in jewellery making</p> <p>KB10. basic properties of gemstones and effect of reaction to pressure, heat and chemicals</p> <p>KB11. gold alloy properties for securing and rework, i.e., which alloy allows rework</p> <p>KB12. filing and soldering</p>

G&J/N0804

Set gemstones using close-setting technique

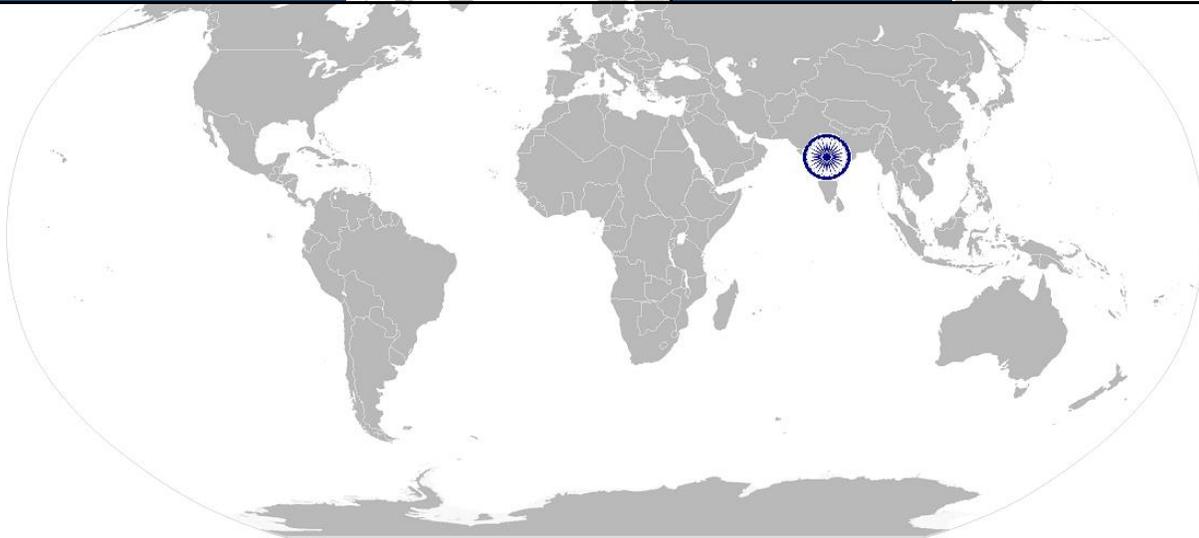
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	Basic reading and writing skills
	The individual on the job needs to know and understand how: SA1. to read notes and put notes on design SA2. to use technology such as computer for visual aid or improving efficiency
	Measuring and Geometry skills
	The individual on the job needs to know and understand how: SA3. to assess precious metal loss at each step of jewellery making so as to deliver product of correct weight and size SA4. to translate design into gems-set jewellery SA5. to set the stone into drilled hole at correct angle for secure and tilt-free placing
	Teamwork and multitasking
	The individual on the job needs to know and understand how: SA6. to share work load with other setters as per capability and work load SA7. to deliver frame to next work process on time
	B. Professional Skills
Reading design	
The individual on the job needs to know and understand how: SB1. to set stones as per design SB2. to spot difficulties with respect to practicality of design	
Using tools	
The individual on the job needs to know and understand how: SB3. to use the right hand tools for achieving secure setting as per design SB4. to use tools so that they do not damage jewellery frame or gemstones SB5. to use tools such as: hammer, tweezers, graver, scoop, wooden plates with lac, gas torches, table light, needles, burrs, files and soldering system SB6. to understand safety and hazards involved in using tools	
Reducing precious-metal and stone loss	
The user/individual on the job needs to know and understand: SB7. prescribed precious-metal and stone loss for the entire jewellery piece SB8. precious-metal loss applicable for setting SB9. how to reduce precious-metal and stone loss below the prescribed standards SB10. how to follow company's policies on collecting gold dust and fragments SB11. how to account in job sheet and return SB12. how to suggest improvements to reduce precious-metal and stone loss limits	
Reflective thinking	
The individual on the job needs to know and understand how: SB13. to improve work processes SB14. to work with good posture in a sitting position SB15. maintain clean work environment and organise tools for ease of use	
Critical thinking	
The individual on the job needs to know and understand how: SB16. to spot process disruptions and delays	

G&J/N0804

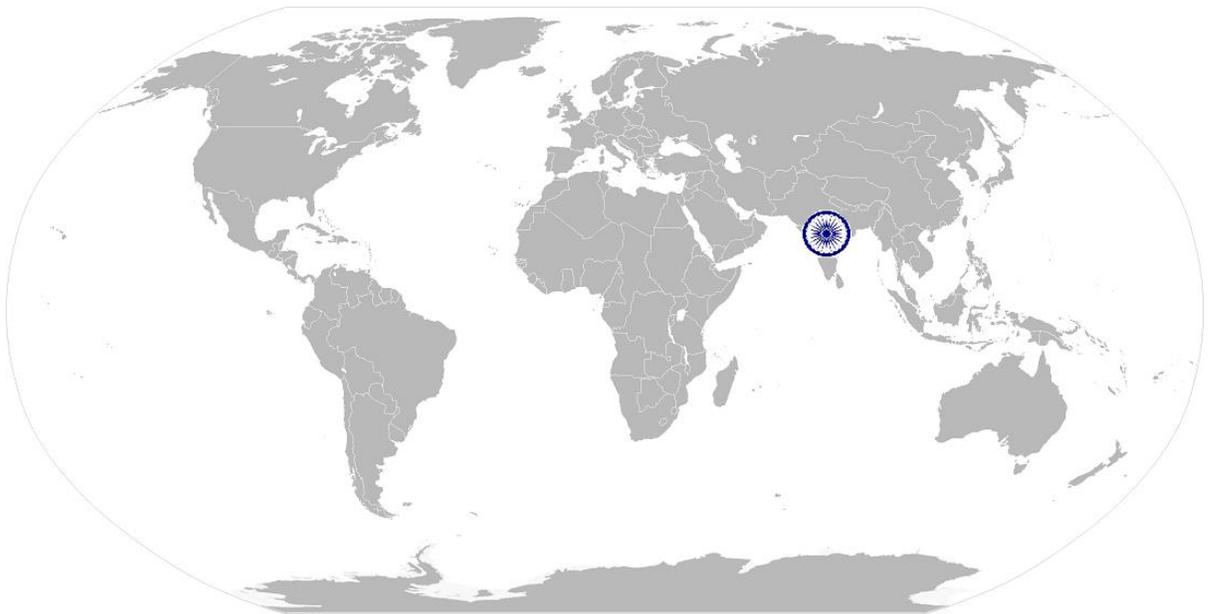
Set gemstones using close-setting technique

NOS Version Control

NOS Code	G&J/N0804		
Credits(NSQF) [OPTIONAL]	TBD	Version number	1.0
Industry	Gems & Jewellery	Drafted on	23/08/13
Industry Sub-sector	Handmade Gold and Gems-set Jewellery	Last reviewed on	13/08/14
		Next review date	11/08/15



National Occupational Standard



Overview

This unit is about and respecting intellectual property rights (IPR) of the company's products and designs and avoiding infringement on copyrights of others.

G&J/N9910

Maintain IPR and respect copyright

Unit Code	G&J/N9910
Unit Title (Task)	Respect IPR of company as well as competitors
Description	This OS unit is about maintaining company's IPR and avoiding infringement on copyright of others
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> Protect company's Intellectual Property Rights (IPR) Avoid infringement to copyright of other companies
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Respecting IPR	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. prevent leak of new designs to competitors by reporting on time</p> <p>PC2. spot any infringement of company's product or design patents</p> <p>PC3. report IPR violations observed in the market, to supervisor or company heads</p> <p>PC4. read copyright clause of the material published on the internet and any other printed material</p> <p>PC5. consult supervisor or senior management when in doubt about using publicly available information</p> <p>PC6. report any infringement observed in the company</p> <p>PC7. spot plagiarism and report</p> <p>PC8. understand rationale of patents and IPR</p> <p>PC9. avoid being involved in IPR violations</p>
Knowledge and Understanding (K)	
A. Organizational Context	<p>The individual on the job needs to know and understand:</p> <p>KA1. company's policies on IPR, plagiarism and order leaks</p> <p>KA2. company's patented products</p> <p>KA3. market trends and company's unique product range</p> <p>KA4. reporting structure</p>
B. Technical Knowledge	<p>The individual on the job needs to know and understand:</p> <p>KB1. basics of patents and IPR laws</p> <p>KB2. how IPR protection is important for competitiveness of a company</p>
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	Communication skills
	<p>The user/individual on the job needs to know and understand how:</p> <p>SA1. to effectively communicate any observed IPR violations or design leaks</p>
B. Professional Skills	Decision making
	<p>The user/individual on the job needs to know and understand when and how:</p> <p>SB1. to report sources of IPR violations</p>

G&J/N9910

Maintain IPR and respect copyright

	Reflective thinking
	The user/individual on the job needs to know and understand how: SB2. to learn from past mistakes and report IPR violations on time
	Critical thinking
	The user/individual on the job needs to know and understand how: SB3. to spot signs of violations and alert authorities in time

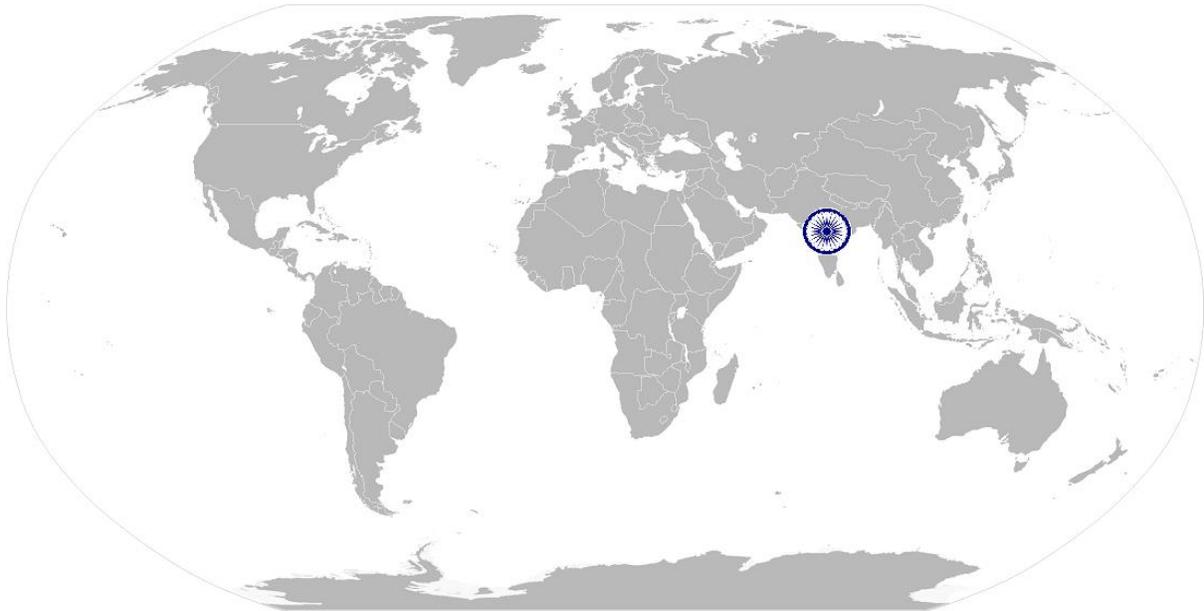
G&J/N9910

Maintain IPR and respect copyright

NOS Version Control

NOS Code	G&J/N9910		
Credits(NSQF) [OPTIONAL]	TBD	Version number	1.0
Industry	Gems & Jewellery	Drafted on	23/08/13
Industry Sub-sector	Handmade Gold and Gems-set Jewellery	Last reviewed on	13/08/14
		Next review date	11/08/15

National Occupational Standard



Overview

This unit is about the artisan or bench worker's level of communication with colleagues or clients. It determines the goldsmith's ability to work as a team member, share work and multi-task in order to achieve the required deliverables on schedule.

G&J/N9912

Coordinate with co-workers

National Occupational Standard

Unit Code	G&J/N9912
Unit Title (Task)	Interact with colleagues and seniors
Description	This OS unit is about communicating with colleagues and seniors in order to maintain smooth ad hazards free work flow
Scope	This unit/task covers the following: <ul style="list-style-type: none"> • Interact with supervisor • Interact with colleagues within and outside the department
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Interaction with supervisor	To be competent, the user/individual on the job must be able to: <ul style="list-style-type: none"> PC1. receive and understand work instructions from reporting superior PC2. communicate to reporting supervisor about process flow improvements, product defects received from previous process, repairs and maintenance of tools and machinery as required PC3. communicate any potential hazards or expected process disruptions PC4. handover completed work to supervisor PC5. understand the work output requirements PC6. comply with company policy and rule PC7. deliver quality work on time as required by reporting any anticipated reasons for delays
Interactions with colleagues and other departments	To be competent, the user/individual on the job must be able to: <ul style="list-style-type: none"> PC8. work as a team with colleagues and share work as per their or own work load and skills PC9. work with colleagues of other departments such as frame making or component making or polishing or setting or stores PC10. communicate an discuss work flow related difficulties in order to find solutions with mutual agreement PC11. receive feedback from QC and rework in order to complete work on time PC12. put team over individual goals PC13. resolve conflicts and multi-task
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	The individual on the job needs to know and understand: <ul style="list-style-type: none"> KA1. company's policies on personnel management KA2. work flow involved in company's jewellery manufacturing process KA3. importance of the individual's role in the workflow KA4. reporting structure

G&J/N9912

Coordinate with co-workers

<p>B. Technical Knowledge</p>	<p>The individual on the job needs to know and understand:</p> <p>KB1. how to communicate effectively</p> <p>KB2. how to build team coordination</p>
<p>Skills (S) [Optional]</p>	
<p>A. Core Skills/ Generic Skills</p>	<p>Teamwork and some multitasking</p> <p>The individual on the job needs to know and understand how:</p> <p>SA1. to share work load as required</p> <p>SA2. to deliver product to next work process on time</p>
<p>B. Professional Skills</p>	<p>Decision making</p> <p>The individual on the job needs to know and understand:</p> <p>SB1. how to report potential areas of disruptions to work process</p> <p>SB2. when to report to supervisor and when to deal with a colleague depending on the type of concern</p> <p>Reflective thinking</p> <p>The individual on the job needs to know and understand:</p> <p>SB5. how to improve work process</p> <p>Critical thinking</p> <p>The individual on the job needs to know and understand:</p> <p>SB6. how to spot process disruptions and delays</p>

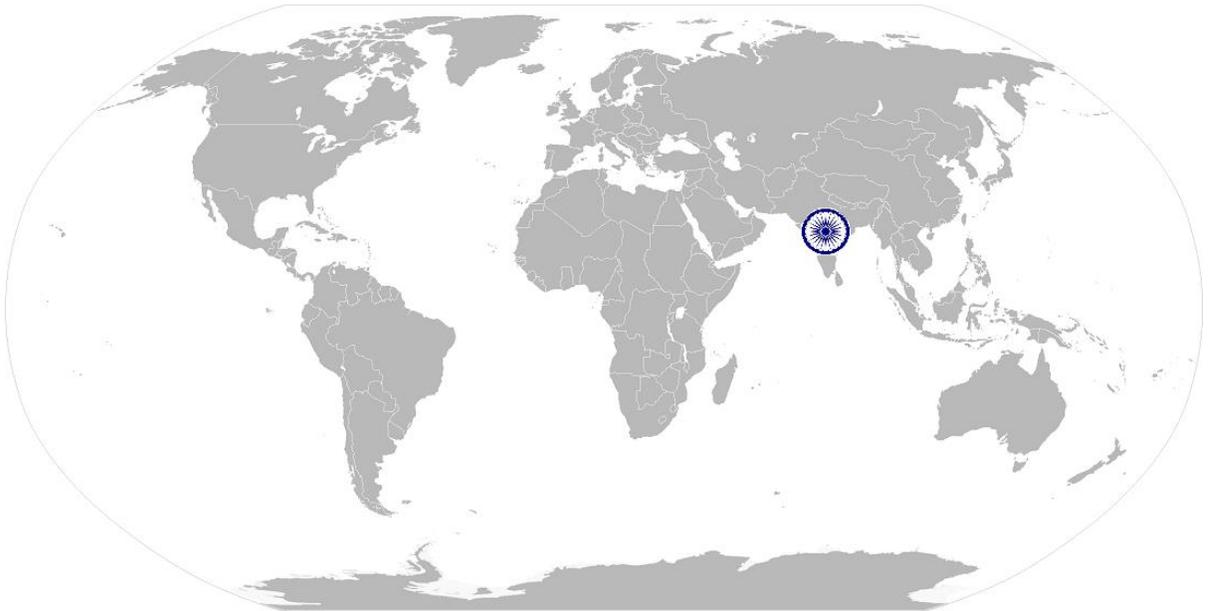
G&J/N9912

Coordinate with co-workers

NOS Version Control

NOS Code	G&J/N9912		
Credits(NSQF) [OPTIONAL]	TBD	Version number	1.0
Industry	Gems & Jewellery	Drafted on	23/08/13
Industry Sub-sector	Handmade Gold and Gems-set Jewellery	Last reviewed on	13/08/14
		Next review date	11/08/15

National Occupational Standard



Overview

This unit is about the artisan or bench worker's commitment towards reporting potential hazards and containing accidents in order to make the work environment safe for self and colleagues.

G&J/N9914

Maintain safe work environment

National Occupational Standard

Unit Code	G&J/N9914
Unit Title (Task)	Work towards having a safe work environment
Description	This OS unit is about being aware of and communicating potential hazards and dangers of accidents on the job
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Understand potential sources of accidents • Communicate to reporting supervisor about hazards in time
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Understanding of potential sources of accidents and communicating	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. avoid accidents related to use of potentially dangerous chemicals, gas torches, sharp tools and hazards from machines</p> <p>PC2. suggest process flow improvements to reduce anticipated or repetitive hazards</p> <p>PC3. report mishandling of tools, machines or hazardous materials</p> <p>PC4. identify electrical problems that could result in accident</p> <p>PC5. spot and report potential hazards on time</p> <p>PC6. follow company policy and rules regarding hazardous materials</p> <p>PC7. deliver quality work on time as required by reporting any anticipated reasons for delays</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	<p>The individual on the job needs to know and understand:</p> <p>KA1. company's policies on handling: harmful chemicals and sharp tools, safety and hazards of machines, fire safety and, disposal of harmful chemicals and materials</p> <p>KA2. work flow involved in company's jewellery manufacturing process</p> <p>KA3. importance of the individual's role in the workflow</p> <p>KA4. reporting structure</p>
B. Technical Knowledge	<p>The 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 causing bodily harm</p> <p>KB3. fire safety education</p> <p>KB4. disposal of hazardous chemicals, tools and materials by following prescribed environmental norms or as per company policy</p>
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	Communication skills
	<p>The individual on the job needs to know and understand how:</p> <p>SA1. to effectively communicate the danger</p>

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B. Professional Skills	Decision making
	The individual on the job needs to know and understand: SB1. importance of reporting potential sources of danger SB2. appropriate actions to be taken in the event of an accident SB3. process for disposing of hazardous materials, safely and following environmental guidelines
	Reflective thinking
	The individual on the job needs to know and understand how: SB4. to learn from past mistakes regarding use of hazardous machines or chemicals or gas torches
	Critical thinking
	The individual on the job needs to know and understand: SB5. how to spot danger SB6. procedures to follow in the event of a fire or other hazard

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NOS Version Control

NOS Code	G&J/N9914		
Credits(NSQF) [OPTIONAL]	TBD	Version number	1.0
Industry	Gems & Jewellery	Drafted on	23/08/13
Industry Sub-sector	Handmade Gold and Gems-set Jewellery	Last reviewed on	13/08/14
		Next review date	11/08/15

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

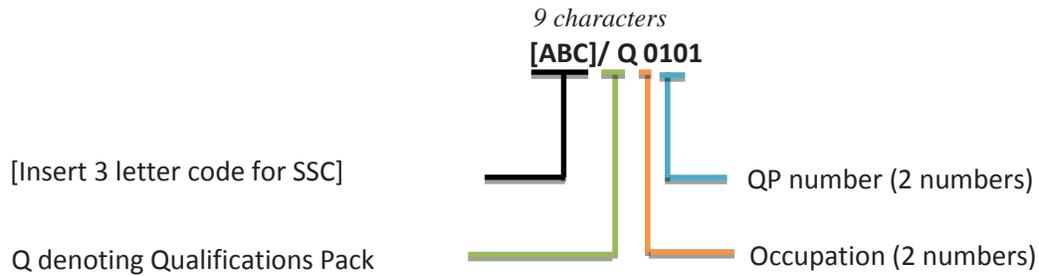
Acronyms

	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
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

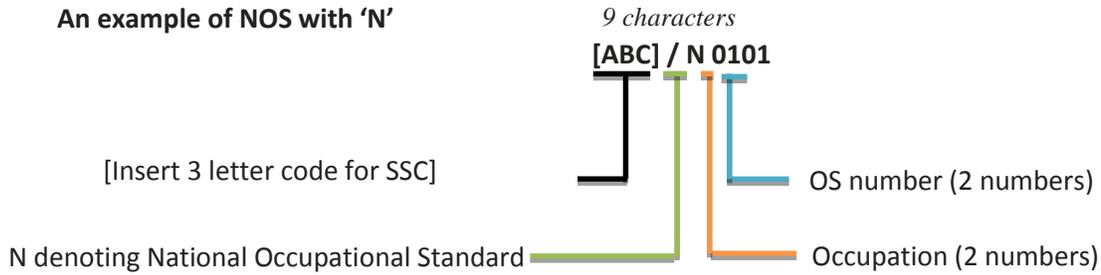
Nomenclature for QP and NOS

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 QP or NOS	Q
Next two numbers	Occupation code	07
Next two numbers	OS number	02

<u>CRITERIA FOR ASSESSMENT OF TRAINEES</u>					
Job Role		Goldsmith Chettinadu Jewellery			
Qualification Pack		Goldsmith Chettinadu Jewellery			
Sector Skill Council		GEMS & JEWELLERY			
To pass the Assessment, a candidate needs to score 50% in Theory and 70% in Practical					
Assessment Strategy				Marks Allocation	
NOS	Elements	Performance Criteria	Theory	Practical	
1. G&J/N0901 Make components for Chettinadu jewellery	Making components and frame	PC1. make components of required dimensions such as size and thickness	0	4	
		PC2. make components of required finish and evenness	0	4	
		PC3. draw or roll metal without overdrawing or splitting or cracking	0	4	
		PC4. anneal the wire, strips and sheets for required malleability for the thickness required	0	4	
		PC5. make required number of different components as per design requirement of Chettinadu jewellery	1	4	
		PC6. ensure that the rings are of uniform thickness and weight for making heavy and thicker chain jewellery	1	2	
		PC7. assess the quantity and weight of different components required to make as per jewellery requirement	2	2	
		PC8. limit precious-metal loss of damaged metal rod or wire	1	2	
		PC9. accurately link the ends to form even rings, collets or chains of required dimensions	2	2	
		PC10. link, solder and file the components into frame of required finish and utility	0	2	
		PC11. achieve required flexibility, utility and symmetry of frame as per design	1	2	
		PC12. meet productivity target	1	2	
		PC13. complete work with minimum hazards and accidents	0	1	
	Handling problems	PC14. deliver complete frames in time by reporting well in advance, any problems faced or anticipated	2	1	
Sub Total			11	36	

CRITERIA FOR ASSESSMENT OF TRAINEES				
2. G&J/N0804 Set gemstones using close-setting technique	Closing the jewellery frame	PC1. drill holes in specified angle as per design and gemstone requirement	0	4
		PC2. close the one end of jewellery using soldering without damage and mistake	0	4
		PC3. file the jewellery appropriately to enable gemstone setting	0	4
	Gemstone setting	PC4. achieve flawless setting as per design requirement	1	4
		PC5. achieve even colour of stones set, i.e., no discolouration or breakage during setting	1	4
		PC6. set stones securely using bezelling	0	4
		PC7. avoid damage to the rest of the frame during the process of setting	0	4
		PC8. achieve productivity as per target	1	4
	Problems handling	PC9. complete work with minimum hazards and accidents	0	4
		PC10. deliver stones set jewellery in time by reporting problems faced or anticipated well in advance	1	4
	Sub Total	4	40	
3. G&J/N9910 Maintain IPR and respect copyright	Respecting IPR	PC1. spot plagiarism and report	0	1
		PC2. understand rationale of patents and IPR	0	1
		PC3. avoid being involved in IPR violations	0	1
		Sub Total	0	3
4. G&J/N9912 Coordinate with others	Interaction with supervisor	PC1. understand the work output requirements	1	0
		PC2. comply with company policy and rule	0	0
		PC3. deliver quality work on time as required by reporting any anticipated reasons for delays	1	0
	Interactions with colleagues and other departments	PC4. put team over individual goals	1	0
		PC5. conflicts resolution and multi-tasking	0	0
	Sub Total	3	0	
5. G&J/N9914 Maintain safe work environment	Understanding of potential sources of accidents and	PC1. spot and report potential hazards on time	1	0
		PC2. follow company policy and rules regarding hazardous materials	0	1

<u>CRITERIA FOR ASSESSMENT OF TRAINEES</u>				
	communicating	PC3. deliver quality work on time as required by reporting any anticipated reasons for delays	1	0
		Sub Total	2	1
		Total	20	80

