

Model Curriculum

Stone Grinder (Grinding Machine Operator)

SECTOR: HANDICRAFTS AND CARPET
SUB-SECTOR: HANDICRAFTS (STONECRAFT)
OCCUPATION: PRE - CRAFTING
REF ID: HCS/Q1403, V1.0
NSQF LEVEL: 3



Certificate

CURRICULUM COMPLIANCE TO QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARDS

is hereby issued by the

HANDICRAFTS AND CARPET SECTOR SKILL COUNCIL

for the

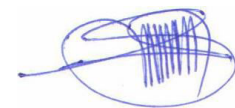
MODEL CURRICULUM

Complying to National Occupational Standards of
Job Role/ Qualification Pack: '**Stone Grinder (Grinding Machine Operator)**' No. '**HCS/O1403 NSQF Level 3**'

Date of Issuance: **July 9th, 2015**

Valid up to: **July 9th, 2019**

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



Authorised Signatory
(Handicrafts and Carpet Sector Skill Council)

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Stone Grinder (Grinding Machine Operator)

CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a “Stone Grinder (Grinding Machine Operator)”, in the “Handicrafts and Carpet” Sector/Industry and aims at building the following key competencies amongst the learner

Program Name	Stone Grinder (Grinding Machine Operator)		
Qualification Pack Name & Reference ID.	HCS/Q1403, v1.0		
Version No.	1.0	Version Update Date	09/11/2018
Pre-requisites to Training	Preferably 5 th pass		
Training Outcomes	<p>After completing this programme, participants will be able to:</p> <ul style="list-style-type: none"> • Identify raw materials and tools required for grinding operations. • Create product shape. • Maintain productivity and quality standards. • Demonstrate teamwork during inter/intra departmental work or engagement. • Maintain Safe work environment. • Maintain personal health. • Perform basic business management activities. 		

This course encompasses 5 out of 5 NOS (National Occupational Standards) of “Stone Grinder (Grinding Machine Operator)” Qualification Pack issued by “Handicrafts and Carpet Sector Skill Council”.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	<p>Introduction</p> <p>Theory Duration (hh:mm) 10:00</p> <p>Practical Duration (hh:mm) 00:00</p> <p>Corresponding NOS Code Bridge Module</p>	<ul style="list-style-type: none"> Identify different stone craft products. Classify the stone craft industry in India. Summarise the use of various tools and equipment used by a Stone Grinder (Grinding Machine Operator). 	Grinding machine, grinding blades, tester
2	<p>Prepare for carrying out grinding operation of stone</p> <p>Theory Duration (hh:mm) 10:00</p> <p>Practical Duration (hh:mm) 30:00</p> <p>Corresponding NOS Code HCS/N1404</p>	<ul style="list-style-type: none"> Interpret product design marking received from the supervisor. Identify standard operating procedure for handling slabs. Identify appropriate work area requirements to ascertain smooth workflow. Maintain records of the quantity of slabs received. Interpret the product design and grinding requirements to give the stone slab a proper shape for further processing. Identify appropriate and stable area to place the stone for carrying out grinding operation. 	Grinding machine, grinding blades, tester
3	<p>Perform grinding operation of stone</p> <p>Theory Duration (hh:mm) 10:00</p> <p>Practical Duration (hh:mm) 30:00</p> <p>Corresponding NOS Code HCS/N1404</p>	<ul style="list-style-type: none"> Identify the functions of the stone grinding machine. Operate the stone grinding machine in accordance to the markings on the stone. Manage the grinding blades as per the shaping requirements of the product. Maintain grinding operation as per product design using the grinding machine. Identify the various methods of filling cracks or imperfections on the grinded stone. Perform grinding of stone slab cleanly as per product specifications without breaking/damaging it. Maintain production requirements to meet daily targets with no wastage of stone slabs. Segregate and dispose of scrape as per the company's SOP. 	Grinding machine, grinding blades, tester
4	<p>Coordinate with</p>	<ul style="list-style-type: none"> Summarise job order and instructions 	Grinding machine,

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	<p>colleagues and work as a team</p> <p>Theory Duration (hh:mm) 05:00</p> <p>Practical Duration (hh:mm) 15:00</p> <p>Corresponding NOS Code HCS/N9901</p>	<p>from reporting supervisor.</p> <ul style="list-style-type: none"> • Classify the work output requirements, targets, performance indicators and incentives. • Formulate plans to deliver quality work on time and report any anticipated reasons for delays. • Create reports on any grievance, production defect and potential hazard. • Communicate on possible process flow improvements. • Communicate maintenance and repair schedules proactively to the supervisor. • Examine feedback on work standards. • Develop proper interaction with respective person to clarify any kind of doubt. • Create reports on shortage or need of raw materials in time. • Elaborate completed work to supervisor. • Communicate with colleagues from within and other departments, clearly and effectively on all aspects, to carry out work efficiently in a team. • Maintain personal etiquettes – polite language, taking up responsibility, disciplined behaviours towards colleagues, etc. • Develop a healthy relationship with colleagues from different functions and understand the nature of their work. • Organise goals and multi-task when required. • Resolve conflicts and ensure smooth workflow. • Identify production requirements. • Communicate and discuss work flow related difficulties in order to find solutions with mutual agreement. • Distinguish feedback from Quality Control and rework in order to complete work on time. • Explain information to colleagues to enable efficient delivery of work. • Identify any error of colleagues, help them to rectify and ensure quality output. • Develop cooperation, coordination, communication and collaboration towards the shared goals, supporting each other's performance while carrying out designated work. • Summarise all the details relating to one's role accurately and as required. 	<p>grinding blades, tester</p>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
5	<p>Maintain safe work environment</p> <p>Theory Duration (hh:mm) 15:00</p> <p>Practical Duration (hh:mm) 25:00</p> <p>Corresponding NOS Code HCS/N9902</p>	<ul style="list-style-type: none"> • Create report on the completed work and maintain records for the same. • Comply with safety procedures while on work to prevent accidents. • Identify adequate safety measures while handling materials, chemicals and tools. • Choose appropriate personal protective gears while working. • Perform basic safety checks before operating any tool or electrical equipment. • Select appropriate and recommended clothing with respect to work environment. • Demonstrate recommended material handling procedures to control material and personal damage. • Perform all procedures as per company's work instructions in order to control operational risks. • Perform duties in a manner which minimizes environmental damage. • Organise wastes safely and correctly in designated areas as per company's SOP. • Create reports on accidents, incidents or problems and submit it to the supervisor without delay. • Maintain zero accident at workplace. • Maintain safety standards and ascertain no material damage. 	Grinding machine, grinding blades, tester
6	<p>Maintain personal health</p> <p>Theory Duration (hh:mm) 15:00</p> <p>Practical Duration (hh:mm) 25:00</p> <p>Corresponding NOS Code HCS/N9903</p>	<ul style="list-style-type: none"> • Change protective equipments when required. • Comply to work instructions strictly in order to reduce the amount of pollution at work place. • Maintain eye protection using proper personal protective equipment. • Apply protective techniques to protect oneself from potential risks at workplace. • Formulate preventive health checkups at regular intervals. • Assess self-health and consult doctor if required. • Implement SOPs while dealing with blisters, scratches, accidental fires or any other type of emergencies at work. • Maintain productivity requirements by avoiding absenteeism from work due to illness. • Identify ways to ensure no long term ill effect on personal health. 	Grinding machine, grinding blades, tester
7	Basic business	<ul style="list-style-type: none"> • Plan and allot work the employees of 	Grinding machine,

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	<p>management</p> <p>Theory Duration (hh:mm) 15:00</p> <p>Practical Duration (hh:mm) 25:00</p> <p>Corresponding NOS Code HCS/N9904</p>	<p>the unit according to their skill and experience.</p> <ul style="list-style-type: none"> • Explain to the employees of the unit with required skills to make market relevant and quality products. • Maximise employee potential. • Solve grievances or issues raised by employees. • Manage employee expectations. • Identify and analyse the cues from the market. • Implement customer preferences. • Create product lines based on market preferences. • Create product lines that are unique and those that could be priced high. • Estimate product price according to market trends. • Devise plan to deploy product lines to the market. • Identify raw materials required with respect to the product lines. • Choose right price for the right quantity of raw materials to be procured. • Identify the appropriate locations or agents to procure the raw materials. • Identify quality materials for procurement. • Organise proper storage for the procured materials. • Maintain bills and records of prices of procurements for future reference. • Maintain healthy vendor relationships. • Identify the nearest market. • Analyze the prevalent price for product lines. • Decide on the most effective means to access the market. • Devise plans for cost effective transportation to the market. • Plan product placement according to market requirements. • Maximise production potential to meet customer expectations. • Analyze and ascertain low cost of production. • Maintain the book of accounts related to the business. • Open and operate a bank account. • Identify cost effective means of running business. • Identify various aspects of business that require recording. • Create formats for recording the various 	<p>grinding blades, tester</p>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<p>aspects of a business.</p> <ul style="list-style-type: none"> • Create various records pertaining to various aspects of business. • Maintain business records with periodic updation. • Maintain necessary documents as per local government and regulatory requirement. • Analyze the records and glean various trends from the same. 	
	<p>Total Duration</p> <p>Theory Duration 80:00</p> <p>Practical Duration 150:00</p>	<p>Unique Equipment Required: Computer, Projector, white board, maker, personal protective equipments, grinding machine, grinding blades, tester</p>	

Grand Total Course Duration: **230 Hours, 0 Minutes**

(This syllabus/ curriculum has been approved by Handicrafts and Carpet Sector Skill Council)

Trainer Prerequisites for Job role: “Stone Grinder (Grinding Machine Operator)” mapped to Qualification Pack: “HCS/Q1403, v1.0”

Sr. No.	Area	Details
1	Description	The individual at work is responsible for using a stone grinding machine with a wheel having abrasive surface to cut, shape and smooth hard stone slab as per the product template.
2	Personal Attributes	The job requires the individual to have eye-hand coordination, manual dexterity, finger dexterity, good near vision, repetitive squatting, bending, lifting heavy weight, moving and ability to work for long hours in sitting position. The individual must be able to work under different environmental conditions in the open area.
3	Minimum Educational Qualifications	10 th pass
4a	Domain Certification	Certified for Job Role: “ <u>Stone Grinder (Grinding Machine Operator)</u> ” mapped to QP: “ <u>HCS/Q1403, v1.0</u> ”. Minimum accepted score is 80%
4b	Platform Certification	Recommended that the Trainer is certified for the Job Role: “ <u>Trainer</u> ”, mapped to the Qualification Pack: “ <u>MEP/Q0102</u> ”. Minimum accepted % as per respective SSC guidelines is 80%.
5	Experience	<ul style="list-style-type: none"> • Total 3 Years experience, • 2 Years of sector-specific experience, • Min. 1 year of teaching experience

CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role: Stone Grinder (Grinding Machine Operator)

Qualification Pack: HCS/Q1403

Sector Skill Council: Handicrafts and Carpet

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 each PC.
2. Each NOS will be assessed both for theoretical knowledge and practical.
3. The assessment will be based on knowledge bank of questions created by the SSC.
4. Individual assessment agencies will create unique question papers for theory and skill practical part for each candidate at each examination/training center.
5. To pass the Qualification Pack, every trainee should score a minimum of 70% in every NOS.
6. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.

		Total Marks (500)			
HCS/N1404	Shape the hard stone slab				
NOS Element	Performance Criteria		Out of	Theory	Skills Practical
Receiving slabs of hard stone	PC1. receive slabs of hard stone with product design marking from the supervisor	100	1	0	1
	PC2. follow standard operating procedure while handling slabs		4	1	3
	PC3. place slabs in a way so that work flow is smooth and there is no damage to other slabs		4	1	3
	PC4. document the quantity of slabs of hard stones received		4	1	3
Create product shape	PC5. take one slab and place it on ground		3	0	3
	PC6. rest it in comfortable and stable position		5	1	4
	PC7. plug in the handheld stone grinding machine to connect it with electricity		4	1	3
	PC8. switch on the machine and start cutting the hard stone slab partially along the crayon marks as per the product design		11	1	10
	PC9. change the grinding blades as per the shaping requirements of the product		11	1	10
	PC10. shape the hard stone slab by grinding it as per the product design using the machine		11	1	10
	PC11. smooth the edges and surface of the product using the handheld grinding machine		11	1	10
	PC12. fill cracks or imperfections in marble with wax that matches the stone color		6	1	5
	PC13. handover the product to supervisor for further processing		3	1	2
Achieving productivity	PC14. understand the product design and grinding requirements to give the hard stone	4	1	3	

and quality standards	slab a proper shape for further processing			
	PC15. grind slabs cleanly as per product specifications without breaking / damaging it	6	1	5
	PC16. achieve daily targets with no wastage of hard stone slabs	6	1	5
	PC17. segregate and dispose of scrape as per the company's SOP	6	1	5
	TOTAL POINTS	100	15	85

HCS/N9901	Coordinate with colleagues and work as a team				
NOS Element	Performance Criteria		Out of	Theory	Skills Practical
Interact with supervisor	PC1. receive job order and instructions from reporting supervisor	100	4	3	1
	PC2. understand the work output requirements, targets, performance indicators and incentives		5	4	1
	PC3. deliver quality work on time and report any anticipated reasons for delays		5	1	4
	PC4. report on any grievances, production defects and any potential hazards		4	2	2
	PC5. communicate on process flow improvements		4	2	2
	PC6. communicate maintenance and repair schedule proactively to the supervisor		4	1	3
	PC7. receive feedback on work standards		4	2	2
	PC8. interact and clarify doubts on design, usage of materials & tools, quality & standards compliance, etc		5	2	3
	PC9. report in time for shortage or need of raw materials		4	1	3
	PC10. handover completed work to supervisor		4	2	2
Work as a team by coordinating with colleagues within and outside the department	PC11. communicate to the colleagues from within and other departments, clearly and effectively on all aspects to carry out the work among the team		5	2	3
	PC12. maintain the etiquettes, use polite language, demonstrate responsible and disciplined behaviours to the colleagues		5	2	3
	PC13. interact with colleagues from different functions and understand the nature of their work		4	2	2
	PC14. put team over individual goals and multi task or share work where necessary supporting the colleagues		4	2	2
	PC15. resolve conflicts and ensure smooth workflow		4	1	3
	PC16. interact and understand the production requirement for the day from the previous and successive processing department and work		4	1	3

	accordingly				
	PC17. communicate and discuss work flow related difficulties in order to find solutions with mutual agreement		4	1	3
	PC18. receive feedback from Quality Control and rework in order to complete work on time		5	1	4
	PC19. share information with colleagues to enable efficient delivery of work		6	3	3
	PC20. highlight any errors of colleagues, help to rectify and ensure quality output		4	2	2
	PC21. work with cooperation, coordination, communication and collaboration, with shared goals and supporting each others performance		4	1	3
Report and Document	PC22. document all the details accurately relating to one's role as required		4	1	3
	PC23. report on the work completed and keep it in records		4	1	3
	TOTAL POINTS		100	40	60

HCS/N9902	Maintain safe work environment				
NOS Element	Performance Criteria		Out of	Theory	Skills Practical
Follow safety procedure and practices	PC1. comply with safety procedures while on work to prevent accidents	100	8	2	6
	PC2. take adequate safety measures while handling materials, chemicals and tools		8	2	6
	PC3. wear appropriate personal protective gears such as gloves, protective goggles, masks etc. while working		8	2	6
	PC4. undertake basic safety checks before operation of all tools and electrical equipments		9	2	7
	PC5. wear appropriate and recommended clothing as per the work environment (eg: working in a furnace area)		9	2	7
	PC6. follow recommended material handling procedure to control material and personal damage		8	2	6
	PC7. perform all procedures as per company's work instructions for controlling operational risk		8	4	4
	PC8. perform the duties in a manner which minimizes environmental damage		6	2	4
	PC9. dispose of waste safely and correctly in a designated area as per company's SOP		8	2	6
	PC10. report any accidents, incidents or problems without delay to the supervisor and take necessary		8	4	4

	immediate action to reduce further danger				
Achieve safety standards	PC11. ensure zero accident at workplace		10	2	8
	PC12. adhere to safety standards and ensure no material damage		10	2	8
	TOTAL POINTS		100	28	72

HCS/N9903	Maintain personal health				
NOS Element	Performance Criteria		Out of	Theory	Skills Practical
Adopt healthy work practices	PC1. always cover the mouth and nose with a dust mask while working and keep on changing when it gets blocked with dust	100	12	4	8
	PC2. follow work instructions strictly to reduce the amount of pollution at the work place e.g. wet the rock / craft material before working on it		10	2	8
	PC3. wear protective goggles over eyes and replace them when scratches on it obscure the vision		10	2	8
	PC4. wear gloves as per the materials used for making handicraft to avoid blisters; scratches and cuts		10	2	8
	PC5. undergo preventive health checkups at regular intervals		10	2	8
	PC6. take prompt treatment from the doctor in case of illness		11	3	8
	PC7. follow SOPs for dealing with blisters; scratches; accidental fires or any other type of emergencies at work		11	4	7
Achieve work productivity while maintaining health	PC8. ensure no productivity loss or absenteeism from work due to illness		13	3	10
	PC9. ensure no long term ill effect on the personal health		13	3	10
	TOTAL POINTS		100	25	75

HCS/N9904	Basic business management				
NOS Element	Performance Criteria		Out of	Theory	Skills Practical
People management	PC1. allot work to the employees of the unit according to their skill and experience	100	3	1	2
	PC2. train the employees of his/her unit with the appropriate skills required to make market relevant and quality products		3	1	2
	PC3. motivate the employees		2	1	1
	PC4. handle the grievances/issues that are raised by the employees		2	1	1
	PC5. manage the employee expectations		2	1	1
Product	PC6. gather and analyse the cues from the		2	1	1

planning	market			
	PC7. ascertain the customer preference	3	1	2
	PC8. create product lines based on current market preference	3	1	2
	PC9. create product lines that are unique and able to price high	3	1	2
	PC10. price the products according to market trends	3	1	2
Procurement of raw materials Market interfacing	PC11. decide the best way to market the product lines	3	1	2
	PC12. make a list of raw materials required according to the product lines	2	0	2
	PC13. ascertain the quantity and right price to procure the materials	3	1	2
	PC14. identify the right locations/agents from where the raw materials can be procured	3	1	2
	PC15. negotiate to get the best price	3	0	3
	PC16. ensure quality materials are procured	4	1	3
	PC17. ensure the procured materials are stored in appropriate conditions	3	1	2
	PC18. maintain the bills and record the prices of procurement for future reference	3	1	2
	PC19. maintain healthy vendor relationships	3	1	2
	PC20. identify the nearest market	3	1	2
	PC21. analyze the prevalent price for product lines	3	2	1
	PC22. decide on the most effective means to access the market	2	1	1
	PC23. plan for cost effective transportation to the market	3	1	2
	PC24. position the product according to market requirements	3	1	2
	PC25. manage customer expectations	2	0	2
	Financial management	PC26. analyze and ascertain the cost of production	3	1
PC27. maintain the book of accounts related to the business		3	1	2
PC28. own and operate a bank account		4	2	2
PC29. identify cost effective means of running business		3	1	2
Record keeping	PC30. identify various aspects of business that require recording	3	2	1
	PC31. create formats for recording	3	2	1
	PC32. make various records pertaining to all aspects of business	3	2	1
	PC33. maintain these records with periodic updation	3	2	1
	PC34. maintain necessary documents as per local government and regulatory	3	2	1

	requirement			
	PC35. analyze the records and glean various trends from the same		3	2
	TOTAL POINTS		100	40
				1
				60