



Model Curriculum

QP Name: Lab Assistant (Ceramics)

QP Code: HCS/Q1002

QP Version: 2.0

NSQF Level: 4

Model Curriculum Version: 1.0

Handicrafts and Carpet Sector Skill Council || Handicrafts and Carpet Sector Skill Council, 3rd Floor,
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Training Parameters

Sector	Handicrafts and Carpet
Sub-Sector	Handicrafts (Ceramics)
Occupation	Quality Control & Testing-Ceramics
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2015/3116.10
Minimum Educational Qualification and Experience	Graduate (Science) with 1 Year of experience in ceramics industry OR 3 years of Diploma after 10th with 3 years of experience OR 2 years Diploma after 12th with 2 years of experience. OR ITI with 4 years of experience
Pre-Requisite License or Training	NA
Minimum Job Entry Age	21 Years
Last Reviewed On	
Next Review Date	
NSQC Approval Date	
QP Version	2.0
Model Curriculum Creation Date	
Model Curriculum Valid Up to Date	
Model Curriculum Version	1.0
Minimum Duration of the Course	
Maximum Duration of the Course	

Program Overview

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

Training Outcomes

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

- Introduction to Handicrafts (Ceramics) Industry in India
- Receive and understand the associated procedures
- Perform the tests
- Coordinate with colleagues and work as a team
- Maintain Safe and Healthy Work Environment
- Maintain Personal Hygiene

Compulsory Modules

The table lists the modules, their duration and mode of delivery.

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
Bridge Module	10:00	00:00	NA	NA	10:00
Module 1 Introduction to Handicrafts (Ceramics) Industry in India	10:00	00:00	NA	NA	10:00
HCS/N1003: Receive and understand the associated procedures NOS Version No. 2.0 NSQF Level 4	20:00	90:00	NA	60:00	110:00
Module 2: Receive and understand the associated procedures	20:00	90:00	NA	60:00	110:00
HCS/N1004: Perform the tests NOS Version No. 2.0 NSQF Level 4	15:00	90:00	NA	20:00	105:00
Module 2: Perform the tests	15:00	90:00	NA	20:00	105:00
HCS/N9901: Coordinate with colleagues and work as a team NOS Version No. 6.0 NSQF Level 4	05:00	45:00	NA	00:00	50:00
Module 3: Coordinate with colleagues and work as a team	05:00	45:00	NA	00:00	50:00
HCS/N9902: Maintain Safe and Healthy Work Environment NOS Version No. 6.0 NSQF Level 4	05:00	35:00	NA	00:00	40:00
Module 4: Maintain Safe and Healthy Work Environment	05:00	35:00	NA	00:00	40:00
HCS/N9903: Maintain Personal Hygiene NOS Version No. 3.0 NSQF Level 4	05:00	40:00	NA	00:00	45:00
Module 5: Maintain Personal Hygiene	05:00	40:00	NA	00:00	45:00

Bridge Module Employability & Entrepreneurship Skills	40:00	20:00	NA	00:00	60:00
Module 6 Employability & Entrepreneurship Skills	40:00	20:00	NA	00:00	60:00
Total Duration	100:00	320:00	NA	80:00	420

Module Details

Module Name 1: Introduction to Handicrafts (Ceramics) Industry in India

Mapped to Bridge Module

Terminal Outcomes:

- outline the Handicrafts (Ceramics) industry in India
- discuss the types of tools and equipment used in the Handicrafts (Ceramics) industry
- identify the different physical properties of Handicrafts (Ceramics)

Duration: <10:00>	Duration: <00:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none">• list different types of Handicrafts (Ceramics) manufactured in India.• recall the states that are the hub for Handicrafts (Ceramics) in India• discuss the importance of using tools and equipment based on physical and operational properties of Handicrafts (Ceramics)• explain the career opportunities available in the Handicrafts (Ceramics) sector	
Classroom Aids:	
Charts, Models, Video presentation, Flip Chart, White-Board/Smart Board, Marker, Duster	
Tools, Equipment and Other Requirements	

Module Name 2: Receive and understand the associated procedures

Mapped to HCS/N1003, V2.0

Terminal Outcomes:

- receive the appropriate parameters
- understand the various defects
- understand the various tests
- understand the acceptance criteria
- understand the sampling plan
- understand reporting and recording

<i>Duration: 20:00</i>	<i>Duration: 90:00</i>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • discuss how to communicate with the technical director • explain the ways of receiving the defects, tests, acceptance criteria, and sampling plan list from the technical director and understand the same • discuss the above parameters with the lab team • role-play of clarifying any doubts on the above parameters with the technical director • discuss the ways to understand material-wise list of defects • explain the benefits of mapping defects like the difference in residue, color changes, variation in melting point, liter weight, flow per second for various materials • discuss the ways to understand when typically these defects will be displayed • explain the importance of analyzing the causes of defects • discuss the benefits of mapping the effects of the defects • explain how to get assess the impact of the defects in the production • discuss the importance of understanding the material-wise list of tests • explain mapping the tests like %residue color, %residue mesh, setting time find, initial residue, etc for various materials • discuss and understand when the tests have to be performed • explain the ways to understand what the tests are supposed to reveal keeping in mind the end product and its usage • explain how to analyze the test results • discuss the ways to map the impact of the test on the overall material quality • discuss the importance of understanding material-wise list of acceptance criteria 	<ul style="list-style-type: none"> • demonstrate how to highlight any discrepancies if observed • demonstrate how to make note of the typical sampling quantities • role-play of analyzing the implications of test reporting • demonstrate how to fill the template with correct data and interpretation • show the locations where the materials are typically stored • show the key product lines of the company • demonstrate the usually used test parameters • demonstrate the reporting formats • role-play of effective inter-team communication • demonstrate the application of basic arithmetic in the testing process • demonstrate the application of percentages and other associated analyses • demonstrate handling of the samples appropriately • demonstrate different materials and associated tests • demonstrate typical sampling quantities

- explain and comprehend the rationale behind the determination of the acceptance criteria
- explain the benefits of understanding how to handle the samples
- discuss how to access the samples
- comprehend how to dispose of the samples
- explain how to understand how test data has to be recorded
- discuss how to help in the creation of the appropriate templates
- discuss the company's policies on personnel management, relevant legislation, standards, policies, and procedures followed in the company
- explain organizations history and culture
- discuss organization structure
- explain the company's policies related to dress code and etiquette
- discuss past test analyses
- explain the past formats for recording and reporting
- discuss the importance of testing
- explain the testing parameters in the ceramics industry
- discuss the benefits of managing his/her time to understand the procedures
- discuss the benefits of managing his/her time to understand the reporting and recording templates
- explain the importance of ensuring that there is no mal handling/accidents due to improper handling of the materials
- discuss recurring challenges in testing
- explain typical acceptance criteria
- discuss the typical defects observed
- discuss the importance of the chemistry knowledge behind the tests
- explain the material properties

Classroom Aids:

Charts, Models, Video presentation, Flip Chart, White-Board/SmartBoard, Marker, Duster

Tools, Equipment, and Other Requirements

Testing tools, etc.

Module Name 3: Perform the tests

Mapped to HCS/N1004, V2.0

Terminal Outcomes:

- taking the appropriate samples
- testing the samples
- documentation of the testing process and findings
- ensure quality and productivity standards

<i>Duration: 15:00</i>	<i>Duration: 90:00</i>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • discuss the importance of understanding the reason for the sampling • explain the benefits of recalling the sample amount for the respective materials • explain the importance of taking the appropriate amount of sample after weighing • discuss how to correlate the testing methodology according to the material and test • discuss the observations of the test process • discuss the observations of the defects and know what defects can be observed in the test process • discuss the importance of understanding why the defects arise • explain the benefits of making notes during the process • explain the importance of retiring the equipment after the test • discuss how to record details of the batch • explain the record the details of the samples • discuss how to record the details on the product lines • explain how to compute the percentages and any other details required • explain how to compute details for achieving the acceptance criteria • discuss the benefits of noting the same appropriately • explain the benefits of interpreting the results when required • discuss how to ensure all results recorded are in line with the template • discuss ways to avoid overall production losses due to quality • discuss how to complete all activities as per internal standards 	<ul style="list-style-type: none"> • demonstrate the application of the appropriate sampling methodology • demonstrate handling the samples carefully • demonstrate replacing the materials in location after taking the samples • perform placement of the samples appropriately on the equipment • perform the appropriate tests on the samples • demonstrate the use of the various testing equipment appropriately • demonstrate removal of the samples and clean the equipment after the test • role-play of alerting about any recurrent issue • role-play of communicating where rework is required • perform testing on the targeted number per day
Classroom Aids:	
Charts, Models, Video presentation, Flip Chart, White-Board/SmartBoard, Marker, Duster	
Tools, Equipment, and Other Requirements	
Testing tools, etc.	

Module Name 4: Coordinate with colleagues and work as a team

Mapped to HCS/N9901, V1.0

Terminal Outcomes:

- Interact with supervisor
- Coordinating with colleagues
- Carry out reporting and documentation

<i>Duration: 05:00</i>	<i>Duration: 45:00</i>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • discuss the benefits of compiling with health, safety gender, and pwd (people with disability) related instructions applicable to the workplace. • discuss the importance of understanding the work output requirements, targets, performance indicators, and incentives. • explain the benefits of delivering quality work on time and report any anticipated reasons for delays and handover completed work to the supervisor • describe how to compile a report on any grievances, production defects, and potential hazards • discuss the importance of communicating maintenance and repair schedule proactively to the supervisor • explain how to interact and clarify doubts on design, usage of materials & tools, quality & standards compliance, etc. • describe how to compile a report in time for shortage or need of raw materials • describe how to communicate with colleagues from within and other departments, clearly and effectively on all aspects to carry out the work among the team • discuss the importance of maintenance etiquette, use polite language, demonstrate responsible and disciplined behavior towards colleagues. • discuss the importance of putting the team over individual goals and multi-task or share work where necessary supporting the colleagues. • explain the benefits of documenting all the details accurately relating to one's role as required. • explain the benefits of knowing the importance of gender equality being followed in the organization and policies for reporting any harassment or inappropriate behavior • explain the benefits of knowing how to accommodate employees with disabilities 	<ul style="list-style-type: none"> • demonstrate mock drills/ evacuation procedures; group discussions, training sensitization programs for gender, and pwd awareness organized at the workplace. • role-play of receiving job orders and instructions from reporting supervisor and receive feedback on work standards. • demonstrate the procedures for working with colleagues, his/her role, and responsibilities about this. • show tools and equipment handling procedures and common potential hazards in the workplace and the procedures to deal with them • demonstrate the expressing and addressing grievances appropriately, deal with difficult work relationships, and manage internal conflicts effectively.

etiquette to adhere to and proper language and terminology

- explain the benefits of knowing how to communicate, offer help, respecting space, parking, etc. for people with disabilities or special needs
- explain the benefits of knowing promoting a safe, accessible, and healthy workplace for disabled employees
- discuss company's policies on preferred language of communication, incentives, quality standards, personnel management, reporting, and escalation matrix policy.
- discuss the company's standard operating procedure (sop) and the risk and impact of not following them.
- explain the organizational hierarchy and the line of reporting structure and work target and review mechanism
- discuss the procedures to report employment-related issues and to deal with conflicts
- discuss the importance of the individuals' role in the organizational workflow and details of the individual responsibilities
- describe how to document the job activity as required like the check sheets, history sheets, etc

Classroom Aids:

Charts, Models, Video presentation, Flip Chart, White-Board/Smart Board, Marker, Duster

Tools, Equipment and Other Requirements

Basic Stationery

Module Name 5: Maintain Safe and Healthy Work Environment

Mapped to HCS/N9902, V6.0

Terminal Outcomes:

- Maintain workplace safety and security standards
- Maintain effective waste management

<i>Duration: 05:00</i>	<i>Duration: 35:00</i>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • explain the importance of carrying out work functions by organizational standards, greening solutions, procedures, policies, legislation, and regulations. • discuss the benefits of application and follow these policies and procedures within your work practices and inculcate sustainable consumption practices • discuss how one can actively get involved in improving the performance of the organization in line with their role and responsibilities and support adaptation to more environmentally friendly processes • describe how to comply with safety procedures while at work to prevent accidents • explain why it is necessary to wear appropriate personal protective gear such as gloves, protective goggles, masks, etc. while working • discuss the importance of ensuring zero accidents at the workplace • discuss the importance of adhering to safety standards and discuss the importance of ensuring no material damage • discussion on making conscious and sustainable decisions for achieving an effective and green workplace. • discuss company's policies on work safety and occupational hazard management • describe why it is important to know the company's hr policies and reporting structure • explain company emergency evacuation procedure • discuss the standard operating procedure (sop) of processes • explain precautionary activities to be followed in the processes 	<ul style="list-style-type: none"> • demonstrate how to take adequate safety measures while handling materials, chemicals, and tools • demonstrate appropriate and recommended clothing as per the work environment • perform recommended material handling procedures to control material and personal damage. • perform all procedures as per the company's work instructions for controlling operational risk to be competent. • perform the duties in a manner that minimizes environmental damage • show disposal of waste safely and correctly in a designated area as per company's sop • role-play of reporting any accidents, incidents, or problems without delay to the supervisor and take necessary immediate action to reduce the further danger • demonstrate accidental risks to the worker • demonstrate how to maintain the work area safe and secure • demonstrate how to perform the duties in a way to minimize accidental risks • demonstrate how to handle chemicals in a safe manner • demonstrate how to operate tools and electrical equipment • perform emergency procedures to be followed in case of a mishap such as fire accidents etc. • perform purpose and usage of protective gears such as gloves, protective goggles, masks, etc. while working • perform safe and correct material handling procedure
Classroom Aids:	
Charts, Models, Video presentation, Flip Chart, White-Board/SmartBoard, Marker, Duster	
Tools, Equipment, and Other Requirements	
Basic Stationery	

Module Name 6: Maintain Personal Hygiene

Mapped to HCS/N9903, V3.0

Terminal Outcomes:

- Follow practices for Personal Hygiene at the workplace

<i>Duration: 05:00</i>	<i>Duration: 40:00</i>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • explain the importance of covering the mouth and nose with a dust mask while working and keep on changing when it gets blocked with dust • explain wearing safety shoes while visiting the production unit can avoid any damage. • explain the benefits of wearing personal protective equipment while visiting the different departments during production. for example mask in the washing section, glasses and masks in an assembly line, and gloves in the printing section, etc. • explain why one should wash /sanitize hands after a factory unit before touching any document, laptop, cell phone, etc. • discuss benefits of undergoing preventive health checkups at regular intervals • discuss importance of taking prompt treatment from the doctor in case of illness • discuss the importance of ensuring no productivity loss or absenteeism from work due to illness. • discuss the importance of ensuring no long-term ill effect on personal health. • explain company's policies on personal health and occupational hazard management • discuss company's hr policies. • discuss company's reporting structure. • health risks to the worker at the workplace. • describe how to perform the duties in a way to minimize pollution at the workplace. • discuss what personal protective equipment should be worn and how it is cared for. • discuss the emergency procedures to be followed in case of a mishap such as fire accidents etc. 	<ul style="list-style-type: none"> • role-play of following sops for dealing with blisters; scratches; accidental fires or any other type of emergencies at work • demonstrate the company's emergency evacuation procedure. • perform healthy work practices. • discuss safe disposal methods for waste. • demonstrate how to provide first-aid treatment at the workplace.
Classroom Aids:	
Charts, Models, Video presentation, Flip Chart, White-Board/Smart Board, Marker, Duster	
Tools, Equipment and Other Requirements	
Basic Stationery	
Mandatory Duration: <00:00>	Recommended Duration: <00:00>
Module Name: On-the-Job Training	80:00
Location: On Site	

Terminal Outcomes

After successful completion of OJT candidate will become well trained in Managing lab.

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
Graduate with 6-12 Months of experience in handicraft industry	Quality Check	6 months	Quality Check	6 months	Quality Check	NA

Trainer Certification	
Domain Certification	Platform Certification
Certificate for Job Role: "Lab Assistant" mapped to QP: "HCS/Q1002"	Certified for Job Role: "Trainer " mapped to QP: "MEP/Q0102; V:1.0"

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	Specialization <Specify the areas of specialization that are desirable.>	Relevant Industry Experience		Training/Assessment Experience		Remarks
		Years	Specialization	Years	Specialization	
Graduate with 6-12 Months of experience in the handicraft industry	Quality Check	6 months	Quality Check	6 months	Quality Check	NA

Assessor Certification	
Domain Certification	Platform Certification
Certificate for Job Role: "Lab Assistant" mapped to QP: "HCS/Q1002"	Certified for Job Role: "Assessor" mapped to QP: "MEP/Q0104; V:1.0"

Assessment Strategy

This section includes the processes involved in identifying, gathering and interpreting information to evaluate the learner on the required competencies of the program.

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 centre
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

Glossary

Term	Description
Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood in order to accomplish a task or to solve a problem.
Key Learning Outcome	Key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (theory) and skills (practical application).
OJT(M)	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training onsite
OJT(R)	On-the-job training (Recommended); trainees are recommended the specified hours of training onsite
Procedural Knowledge	Procedural knowledge addresses how to do something, or how to perform a task. It is the ability to work, or produce a tangible work output by applying cognitive, affective or psychomotor skills.
Training Outcome	Training outcome is a statement of what a learner will know, understand and be able to do upon the completion of the training .
Terminal Outcome	Terminal outcome is a statement of what a learner will know, understand and be able to do upon the completion of a module . A set of terminal outcomes help to achieve the training outcome.

Acronyms and Abbreviations

Term	Description
QP	Qualification Pack
NSQF	National Skills Qualification Framework
NSQC	National Skills Qualification Committee
NOS	National Occupational Standards

Occupational Map - Handicrafts and Carpet Sector Skill Councils									
Occupational Map - Ceramic									
Handicrafts and Carpet Ceramic									
Sector									
Sub-Sector									
Sub-Sectors	Ceramic								
Occupations	Production Management - Ceramic	Product R&D - Ceramic	Mixing and Milling	Moulding	Jigging	Carting	Blue pottery making	Finishing and Painting	Quality Control & Testing - Ceramic
Occupational Code (HS-SS)	01	02	03	04	05	06	07	08	09
Level 10									
Level 9									
Level 8									
Level 7									
	Plant Head	R&D Head							
Level 6	Production Head	Studio Potter							Quality Control Head - Ceramic
Level 5				ENTREPRENEUR		Bisque Firing and Stamping Supervisor			Testing Incharge - Ceramic
	Plant Supervisor	Ceramic Product Designer		Moulding Supervisor	Jigging Supervisor	Carting Supervisor	Pottery Supervisor	Ceramic Product Decorator	Quality Control Supervisor - Ceramic
Level 4			Paq Miller					Sketching and Painting Technician	Quality Check Technician - Ceramic
			Blunger Machine Operator	Ceramic and Terracotta Toy Maker/Marble Artist		Carting Operator		Colour mixing Operator	Lab Assistant - Ceramic
		Modeler	Mixing operator	Abrasive Wheel Maulder	Jigging operator	Kilnman	Trimmer and Shaper Operator	Glazing Machine Operator	Tile Quality Checker
Level 3				Crushing Dry Clay Artisan			Engaging Artisan	Fettler	
	Packer			Maulder		Sand Core Maker - Manual	Material Preparation Worker	Spray Painter	
Level 2									
Level 1									

Note	Description
Occupation	Metals
	ORG Approved
	MSQC
	Table
Color Coding (LEGEND)	Mass
	Development
	Elective

List of companies validated the QP

Sl.No	Name of the Company	Size of the Company
1	Tara Chand	Artisan
2	Gyan Chand	Artisan
3	Kiran Raj	Artisan
4	Sri Ram	Artisan
5	Ram Narayan Kumar	Artisan
6	Suraj Nat	Artisan
7	Kamla Devi	Artisan
8	Suwalal Bairwa	Artisan
9	Kaluram Meena	Artisan
10	Santosh Devi	Artisan

Further contact details and a copy of the validation are submitted both with NSDC and NSDA