



# **Competency Standard (CS)**

**Design, Decoration & Printing**

**Level-1**

**Ceramic Sector**

**Competency Standard Code: CS-CER-DDP-L1-EN-V1**



**National Skills Development Authority  
Chief Advisor's Office  
Government of the People's Republic of Bangladesh**



## Copyright

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This Competency Standard for **Design, Decoration & Printing** is a document for the development of curricula, teaching and learning materials, and assessment tools. It also serves as the document for providing training consistent with the requirements of industry in order to meet the qualification of individuals who graduated through the established standard via competency-based assessment for a relevant job.

Public and private institutions may use the LEormation contained in this standard for activities benefitting Bangladesh.

## Introduction

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The NSDA aims to enhance an individual's employability by certifying completeness with skills. NSDA works to expand the skilling capacity of identified public and private training providers qualitatively and quantitatively. It also aims to establish and operationalize a responsive skill ecosystem and delivery mechanism through a combination of Well-defined set of mechanisms and necessary technical supports.

Key priority economic growth sectors identified by the government have been targeted by NSDA to improve current job skills along with existing workforce to ensure required skills to industry standards. Training providers are encouraged and supported to work with industry to address identified skills and knowledge to enable industry growth and increased employment through the provision of market responsive inclusive skills training program. " **Design, Decoration & Printing**" is selected as one of the priority occupations of **Ceramic** Sector. This standard is developed to adopt a demand driven approach to training with effective inputs from Industry Skills Councils, employer associations and employers.

Generally, a competency standard LEorms curriculum, learning materials, assessment and certification of trainees enrolled in Skills Training. Trainees who successfully pass the assessment will receive a qualification in the Bangladesh National Qualification Framework (BNQF) and will be listed on the NSDA's online portal.

This competency standard is developed to improve skills and knowledge in accordance with the job roles, duties and tasks of the occupation and ensure that the required skills and knowledge are aligned to industry requirements. A series of stakeholder consultations, workshops were held to develop this document.

The document also details the format, sequencing, wording and layout of the Competency Standard for an occupation which is comprised of Units of Competence and its corresponding elements.

## Overview

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A **Competency Standard** is a written specification of the knowledge, skills and attitudes required for the performance of an occupation, trade or job corresponding to the industry standard of performance required in the workplace.

The purpose of a competency standards is to:

- provide a consistent and reliable set of parts for training, recognising and assessing people's skills, and may also have optional support materials
- enable industry recognised qualifications to be awarded through direct assessment of workplace competencies
- encourage the development and delivery of flexible training which suits individual and industry requirements
- encourage learning and assessment in a work-related environment which leads to verifiable workplace outcomes

Competency standards are developed by a working group comprised of occupation specific experts, academicians, representatives from NSDA and ISC to identify the competencies required of an occupation in **Ceramice Sector**.

Competency standards describe the knowledge, skills and attitude needed to perform effectively in the workplace. CS acknowledge that people can achieve technical and vocational competency in many ways by emphasising what the learner can do, not how or where they learned to do it.

With competency standards, training and assessment may be conducted at the workplace or at training institute or any combination of these.

Competency standards consist of a number of units of competency. A unit of competency describes a distinct work activity that would normally be undertaken by one person in accordance with industry standards.

Units of competency are documented in a standard format that comprises of:

- unit title
- nominal duration
- unit code
- unit descriptor
- elements and performance criteria
- variables and range statement
- curricular content guide
- assessment evidence guides

Together, all the parts of a unit of competency:

- describe a work activity
- guide the assessor to determine whether the candidate is competent or not yet competent

The ensuing sections of this document comprise of a description of the relevant occupation, trade or job with all the key parts of a unit of competency, including:

- a chart with an overview of all Units of Competency for the relevant occupation, trade or job including the Unit Codes and the Unit of Competency titles and corresponding Elements
- the Competency Standard that includes the Unit of Competency, Unit Descriptor, Elements and Performance Criteria, Range of Variables, Curricular Content Guide and Assessment Evidence Guide.

## .Competency Standards for National Skill Certificate – 1 in

### Design, Decoration & Printing, Ceramice Sector

#### Level Descriptors of Skills Sector, BNQF Level 1-6

Level & Job classification	Knowledge Domain	Skills Domain	Responsibility Domain
6-Mid-Level Manager/ Sub Assistant Engineer	Comprehensive actual and theoretical knowledge within a specific work or study area with an awareness of the validity and limits of that knowledge, able to analyse, compare, relate and evaluate.	Specialised and wider range of cognitive and practical skills required to provide leadership in the development of creative solutions to defined problems. Communicate professional issues and solutions to the team and to external partners/users.	Work under broad guidance and self-motivation to execute strategic and operational plan/s. Lead lower-level management. Diagnose and resolve problems within and among work groups.
5-Supervisor	Broad knowledge of the underlying, concepts, principles, and processes in a specific work or study area, able to scrutinize and break LEormation into parts by identifying motives or causes.	Broad range of cognitive and practical skills required to generate solutions to specific problems in one or more work or study areas. Communicate practice-related problems and possible solutions to external partners.	Work under guidance of management and self-direction to resolve specific issues. Lead and take responsibility for the work and actions of group/team members. Bridge between management.
4-Highly Skilled Worker	Broader knowledge of the underlying, concepts, principles, and processes in a specific work or study area, able to solve problems to new situations by comparing and applying acquired knowledge.	A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying the full range of methods, tools, materials and LEormation. Communicate using technical terminology and IT technology with partners and users as per workplace requirements.	Work under minimal supervision in specific contexts in response to workplace requirements. Resolve technical issues in response to workplace requirements and lead/guide a team/ group.
3-Skilled Worker	Moderately broad knowledge in a specific work or study area, able to perceive ideas and abstract from drawing and design according to workplace requirements.	Basic cognitive and practical skills required to use relevant LEormation in order to carry out tasks and to solve routine problems using simple rules and tools. Communicate with his team and limited external partners upholding the values, nature and culture of the workplace	Work or study under supervision with considerable autonomy. Participate in teams and responsible for group coordination.
2-Semi Skilled Worker	Basic understanding of underpinning knowledge in a specific work or study area, able to interpret and apply common occupational terms and instructions.	Skills required to carry out simple tasks, communicate with his team in the workplace presenting and discussing results of his work with required clarity.	Work or study under supervision in a structured context with limited scope of manipulation
1 –Basic Skilled Worker	Elementary understanding of ability to interpret the underpinning knowledge in a specific study area, able to interpret common occupational terms and instructions.	Specific Basic skills required to carry out simple tasks. Interpret occupational terms and present the results of own work within guided work environment/ under supervision.	Work under direct supervision in a structured context with limited range of responsibilities.

## List of Abbreviations

NSDA	- National Skills Development Authority
CS	- Competency Standard
SCVC	- Standard and Curriculum Validation Committee
ISC	- Industry Skills Council
CBLM	- Competency Based Learning Material
UoC	- Unit of Competency
PPE	- Personal Protective Equipment
OSH	- Occupational Safety and Health
CBC	- Competency Based Curriculum
CER	- Ceramic Sector
BNQF	- Bangladesh National Qualification Framework
DDP	- Design, Decoration & Printing
STP	- Skills Training Provider
SOP	- Standard Operating Procedure
UoC	- Unit of Competency
4 IR	- 4th Industrial Revolution





Approved by  
37<sup>th</sup> Authority meeting of NSDA  
Held on 21.10.2024



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**Competency Standards for National Skill Certificate – 1 in  
Design, Decoration & Printing  
Course Structure**

SL	Unit Code and Title		UoC Level	Nominal Hours
Generic Units of Competencies				40
1.	GU-01-L1-V1	Perform Computations Using Basic Mathematical Concepts	1	15
2.	GU-02-L1-V1	Apply OSH Procedure in the Workplace	1	15
3.	GU-06-L1-V1	Practice House Keeping Procedure	1	10
Sector Specific Units of Competencies				40
4.	SU- LE -01-L1-V1	Interpret the knowledge to work in the Ceramic Sector	1	20
5.	SU- LE -02-L1-V1	Use Measuring and Checking Tools and Instruments	1	20
Occupation Specific Units of Competencies				280
6.	OU-CER-DDP-01-L2-V1	Perform Decal Decoration	1	75
7.	OU-CER-DDP-02-L2-V1	Carryout Hand Painting	1	75
8.	OU-CER-DDP-03-L2-V1	Conduct Spray Painting	1	80
9.	OU-CER-DDP-04-L2-V1	Make Screen	1	50
Total Nominal Hours				360

## Units & Elements at a Glance:

### Generic Units of Competencies (40 hours)

Code	Unit of Competency	Elements of Competency	Duration (Hours)
GU-01-L1-V1	Perform Computations Using Basic Mathematical Concepts	<ol style="list-style-type: none"> <li>1. Identify calculation requirements in the workplace</li> <li>2. Select appropriate mathematical methods for the calculation.</li> <li>1. Use tool/instrument to perform calculations</li> </ol>	15
GU-02-L1-V1	Apply Occupational Safety and Health (OHS) Procedure in the Workplace	<ol style="list-style-type: none"> <li>1. Identify OSH policies and procedures</li> <li>2. Follow OSH procedure</li> <li>3. Report hazards and risks</li> <li>4. Respond to emergencies</li> <li>5. Maintain personal well-being</li> </ol>	15
GU-06-L1-V1	Practice House Keeping Procedure	<ol style="list-style-type: none"> <li>1. Sort and remove unnecessary items</li> <li>2. Arrange items</li> <li>3. Maintain work area, tools and equipment</li> <li>4. Follow standardized work process and procedure</li> <li>5. Perform work spontaneously</li> </ol>	10

### Sector Specific Units of Competencies (40 Hours)

Code	Unit of Competency	Elements of Competency	Duration (Hours)
SU-CER-01-L1-V1	Interpret the Knowledge to Work in the Ceramic Sector	<ol style="list-style-type: none"> <li>1. Interpret job roles and responsibilities</li> <li>2. Identify and observe OSH in the manufacturing industries</li> <li>3. Plan work activities</li> <li>4. Work with others</li> </ol>	20
SU-CER-02-L1-V1	Use Measuring and Checking Tools and Instruments	<ol style="list-style-type: none"> <li>1. Prepare for work</li> <li>2. Select the job to be measured and checked</li> <li>3. Select measuring and checking tools and instruments</li> <li>4. Take and check measurements</li> <li>5. Measurements are recorded and communicated</li> </ol>	20

		6. Clean and store measuring and checking instruments	
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### Occupation Specific Units of Competencies (280 Hours)

Code	Unit of Competency	Elements of Competency	Hours
OU-CER-DDP-01-L2-V1	Perform Decal Decoration	<ol style="list-style-type: none"> <li>1. Follow OSH practices</li> <li>2. Prepare ware and decal</li> <li>3. Apply decal on raw products</li> <li>4. Apply decal with ambush powder on raw products</li> <li>5. Rectify routine problems</li> <li>6. Clean and maintain work area, tools and equipment</li> </ol>	75
OU-CER-DDP-02-L2-V1	Carryout Hand Painting	<ol style="list-style-type: none"> <li>1. Follow OSH</li> <li>2. Prepare colour or painting</li> <li>3. Paint objects on wheel</li> <li>4. Paint objects by hand</li> <li>5. Rectify routine problems</li> <li>6. Clean and maintain work area, tools and equipment</li> </ol>	75
OU-CER-DDP-03-L2-V1	Conduct Spray Painting	<ol style="list-style-type: none"> <li>1. Follow OSH practices</li> <li>2. Prepare for spraying</li> <li>3. Spray to objects (Table and sanitary ware)</li> <li>4. Rectify routine problems</li> <li>5. Clean and maintain work area, tools and equipment</li> </ol>	85
OU-CER-DDP-04-L2-V1	Make Screen	<ol style="list-style-type: none"> <li>1. Follow OSH practices</li> <li>2. Prepare for work</li> <li>3. Set screen equipment in tension machine</li> <li>4. Prepare screen</li> <li>5. Rectify routine problems</li> <li>6. Clean and maintain work area, tools and equipment</li> </ol>	50





## **Generic Unit of Competenceis**

<b>Unit Code and Title</b>	<b>GU-01-L1-V1: Perform Computations Using Basic Mathematical Concepts</b>
<b>Unit Descriptor</b>	<p>This unit of competency requires the knowledge, skills and attitude to perform computations using basic mathematical concepts in the workplace.</p> <p>It specifically includes the tasks of identifying calculation requirements in the workplace, selecting appropriate mathematical method/concept for the calculation and using appropriate instruments/tools to perform calculation.</p>
<b>Nominal Hours</b>	<b>15 Hours</b>
<b>Elements of Competency</b>	<b>Performance Criteria</b> <b>Bold &amp; Underlined</b> terms are elaborated in the Range of Variables Training Components
1. Identify calculation requirements in the workplace	1.1 Job requirements are identified; 1.2 <b><u>Measurements</u></b> are selected in accordance with job requirement; 1.3 Calculation requirements are identified from <b><u>workplace Information</u></b> ;
2. Select appropriate mathematical methods for the calculation.	2.1 Mathematical methods are identified; 2.2 <b><u>Appropriate method</u></b> is selected to carry out the calculation requirements; 2.3 Tolerance and clearance limits are identified and adjusted according to the job requirements;
3. Use tool/instrument to perform calculations	3.1 Work instructions are confirmed and applied to the job in hand; 3.2 Materials to be measured are identified as per job specification; 3.3 Appropriate <b><u>tool/ instrument</u></b> is selected based on materials to be measured;
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (may include but not limited to)
1. Measurements	1.1 Length 1.2 Width 1.3 Weight 1.4 Volume 1.5 Tolerance
2. workplace Information	2.1 Job Order 2.2 Design 2.3 Working drawing 2.4 Verbal instructions 2.5 Written Instruction
3. Appropriate method	3.1 Addition

	3.2 Subtraction 3.3 Division 3.4 Multiplication 3.5 Conversion 3.6 Percentage and ratio calculation
4. Tool/ Instrument	4.1 Calculator 4.2 Scale 4.3 Measuring tape 4.4 Marker
<b>Evidence Guide</b> The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical Aspects of Competency	Assessment required evidence that the candidate: <ul style="list-style-type: none"> <li>1.1 Identified calculation requirements from workplace LEormation</li> <li>1.2 Selected appropriate method to carry out the calculation requirements</li> <li>1.3 Selected measurements</li> <li>1.4 Selected appropriate methods</li> <li>1.5 Used tool/instrument</li> <li>1.6 Added numbers</li> <li>1.7 Subtracted numbers</li> <li>1.8 Multiplied numbers.</li> <li>1.9 Divided numbers.</li> <li>1.10 Completed calculations using appropriate tools/instruments</li> </ul>
2. Underpinning Knowledge	<ul style="list-style-type: none"> <li>2.1. Numerical concept</li> <li>2.2. Basic mathematical methods such as addition, subtraction, multiplication and division and percentage.</li> <li>2.3. Mathematical language, symbols and terminology.</li> <li>2.4. Measuring units</li> </ul>
3. Underpinning Skills	<ul style="list-style-type: none"> <li>3.1 Interpreting numerical concept</li> <li>3.2 Interpreting mathematical methods such as addition, subtraction, multiplication and division and percentage.</li> <li>3.3 Interpreting mathematical language, symbols and terminology.</li> <li>3.4 Interpreting measuring units.</li> </ul>
4. Underpinning Attitudes	<ul style="list-style-type: none"> <li>4.1. Commitment to occupational health and safety</li> <li>4.2. Environmental concerns</li> <li>4.3. Eagerness to learn</li> <li>4.4. Tidiness and timeliness</li> <li>4.5. Respect for rights of peers and seniors in workplace</li> <li>4.6. Communication with peers and seniors in workplace</li> </ul>

5. Resource Implications	5.1. Work place 5.2. Materials relevant to the proposed activity 5.3. All tools, equipment, material and documentation required. 5.4. Relevant specifications or work instructions
6. Methods of Assessment	Assessment methods may include but not limited to: 6.1. Written Test 6.2. Demonstration 6.3. Oral Questioning 6.4. Portfolio
7. Context of Assessment	7.1 Competency assessment must be done in a training center or in an actual or simulated workplace after completion of the training module. 7.2 Assessment should be done by an NSDA certified/ nominated assessor
<b>Accreditation Requirements</b> Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under BNQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.	

<b>Unit Code and Title</b>	<b>GU-02-L1-V1: Apply Occupational Safety and Health (OSH) Procedure in the Workplace</b>
<b>Unit Descriptor</b>	<p>This unit covers the knowledge, skills and attitudes required to apply occupational safety and health (OSH) procedure in the workplace.</p> <p>It specifically includes identifying OSH policies and procedures, following OSH procedure, reporting hazards and risks, responding to emergencies, and maintaining personal well-being.</p>
<b>Nominal Hours</b>	<b>15 Hours</b>
<b>Elements of Competency</b>	<p><b>Performance Criteria</b>  <b><u>Bold &amp; Underlined</u></b> terms are elaborated in the Range of Variables</p>
1. Identify OSH policies and procedures	<p>1.1. <b><u>OHS policies</u></b> and <b><u>safe operating procedures</u></b> are accessed and stated</p> <p>1.2. <b><u>Safety signs and symbols</u></b> are identified and followed</p> <p>1.3. Emergency response, evacuation procedures and other contingency measures are determined according to workplace requirements</p>
2. Follow OSH procedure	<p>2.1 <b><u>Personal protective equipment (PPE)</u></b> is selected and collected as required</p> <p>2.2 Personal protective equipment (PPE) is correctly used in accordance with organization OSH procedures and practices</p> <p>2.3 A clear and tidy workplace is maintained as per workplace standard</p> <p>2.4 PPE is maintained to keep them operational and compliant with OHS regulations</p>
3. Report hazards and risks.	<p>3.1 <b><u>Hazards</u></b> and risks are identified, assessed and controlled</p> <p>3.2 Incidents arising from hazards and risks are reported to designated authority</p>
4. Respond to emergencies	<p>4.1 Alarms and warning devices are responded</p> <p>4.2 Workplace <b><u>emergency procedures</u></b> are followed</p> <p>4.3 <b><u>Contingency measures</u></b> during workplace accidents, fire and other emergencies are recognized and followed in accordance with organization procedures</p> <p>4.4 First aid procedures is applied during emergency situations</p>
5. Maintain personal well-being	<p>5.1 OHS policies and procedures are adhered to</p> <p>5.2 OHS awareness programs are participated in as per workplace guidelines and procedures</p> <p>5.3 Corrective actions are implemented to correct unsafe condition in the workplace</p> <p>5.4 <b><u>“Fit to work” records</u></b> are updated and maintained according to workplace requirements</p>

Range of Variables	
Variables	Range (may include but not limited to):
1. OHS policies	1.1. Bangladesh standards for OHS 1.2. Fire Safety Rules and Regulations 1.3. Code of Practice 1.4. Industry Guidelines
2. Safe operating procedures	2.1 Orientation on emergency exits, fire extinguishers, fire escape, etc. 2.2 Emergency procedures 2.3 First Aid procedures 2.4 Tagging procedures 2.5 Use of PPE 2.6 Safety procedures for hazardous substances
3. Safety signs and symbols	3.1 Direction signs (exit, emergency exit, etc.) 3.2 First aid signs 3.3 Danger Tags 3.4 Hazard signs 3.5 Safety tags 3.6 Warning signs
4. Personal Protective Equipment (PPE)	4.1 Gas Mask 4.2 Gloves 4.3 Safety boots 4.4 Face mask 4.5 Overalls 4.6 Goggles and safety glasses 4.7 Sun block 4.8 Chemical/Gas detectors
5. Hazards	5.1 Chemical hazards 5.2 Biological hazards 5.3 Physical Hazards 5.4 Mechanical and Electrical Hazard 5.5 Mental hazard 5.6 Ergonomic hazard
6. Emergency Procedures	6.1 Fire fighting 6.2 Earthquake 6.3 Medical and first aid 6.4 Evacuation
7. Contingency measures	7.1 Evacuation 7.2 Isolation 7.3 Decontamination
8. “Fit to Work” records	8.1 Medical Certificate every year 8.2 Accident reports, if any

	8.3 Eye vision certificate
<b>Evidence Guide</b> The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency	
1. Critical aspects of competency	Assessment required evidence that the candidate: <ul style="list-style-type: none"> <li>1.1 stated OHS policies and safe operating procedures</li> <li>1.2 followed safety signs and symbols</li> <li>1.3 used personal protective equipment (PPE)</li> <li>1.4 maintained workplace clear and tidy</li> <li>1.5 assessed and Controlled hazards</li> <li>1.6 followed emergency procedures</li> <li>1.7 responded to emergencies</li> <li>1.8 maintained personal well-being</li> </ul>
2. Underpinning knowledge	<ul style="list-style-type: none"> <li>2.1 Define OHS</li> <li>2.2 OHS Workplace Policies and Procedures</li> <li>2.3 Work Safety Procedures</li> <li>2.4 Emergency Procedures</li> <li>2.5 Hazard control procedure</li> <li>2.6 Different types of Hazards</li> <li>2.7 PPE and there uses</li> <li>2.8 Personal Hygiene Practices</li> <li>2.9 OHS Awareness</li> </ul>
3. Underpinning skills	<ul style="list-style-type: none"> <li>3.1 Accessing OHS policies</li> <li>3.2 Handling of PPE</li> <li>3.3 Handling cleaning tools and equipment</li> <li>3.4 Writing report</li> <li>3.5 Responding to emergency procedures</li> </ul>
4. Required attitude	<ul style="list-style-type: none"> <li>4.1 Commitment to occupational health and safety</li> <li>4.2 Sincere and honest to duties</li> <li>4.3 Promptness in carrying out activities</li> <li>4.4 Environmental concerns</li> <li>4.5 Eagerness to learn</li> <li>4.6 Tidiness and timeliness</li> <li>4.7 Respect of peers and seniors in workplace</li> <li>4.8 Communicate with peers and seniors in workplace</li> </ul>
5. Resource implications	<ul style="list-style-type: none"> <li>5.1 Workplace</li> <li>5.2 Equipment and outfits appropriate in applying safety measures</li> <li>5.3 Tools, materials and documentation required</li> <li>5.4 OHS Policies and Procedures</li> </ul>

6. Methods of assessment	<p>Competency should be assessed by:</p> <p>6.1 Written test</p> <p>6.2 Demonstration</p> <p>6.3 Oral Questioning</p>
7. Context of Assessment	<p>7.1 Competency assessment must be done in a training center or in an actual or simulated workplace after completion of the training module.</p> <p>7.2 Assessment should be done by an NSDA certified/nominated assessor</p>
<p><b>Accreditation Requirements</b></p> <p>Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under BNQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.</p>	



Unit Code and Title	GU-06-L1-V1: Practice House Keeping Procedure
Unit Descriptor	<p>This unit covers the knowledge, skills and attitude required to Practice housekeeping procedure.</p> <p>It specifically includes sorting and removing unnecessary items, arranging items, maintaining work area, tools and equipment, following standardized work process and procedure and performing work spontaneously.</p>
Nominal Hours	10 Hours
Elements of Competency	<b>Performance Criteria</b> <u><b>Bold underlined</b></u> terms are elaborated in the Range of Variables
1. Sort and remove unnecessary items	1.1 Reusable, recyclable materials are sorted in accordance with company/office procedures 1.2 <u><b>Unnecessary items</b></u> are removed and disposed of in accordance with company or office procedures
2. Arrange items	2.1 Items are arranged in accordance with company/office housekeeping procedures 2.2 Work area is arranged according to job requirements 2.3 Activities are prioritized based on instructions. 2.4 Items are provided with clear and visible <u><b>identification marks</b></u> based on procedure 2.5 Safety equipment and evacuation passages are kept clear and accessible based on instructions
3. Maintain work area, tools and equipment	3.1 Cleanliness and orderliness of work area is maintained in accordance with company/office procedures 3.2 Tools and equipment are cleaned in accordance with manufacturer's instructions/manual 3.3 <u><b>Minor repairs</b></u> are performed on tools and equipment in accordance with manufacturer's instruction/manual 3.4 Defective tools and equipment are reported to immediate supervisor
4. Follow standardized work process and procedure	4.1 Materials for common use are maintained in designated area based on procedures 4.2 Work is performed according to standard work procedures. Abnormal incidents are reported to immediate supervisor
5. Perform work spontaneously	5.1 Work is performed as per instruction 5.2 Company and office <u><b>decorum</b></u> are followed and complied with 5.3 Work is performed in accordance with OSH requirements

<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (may include but not limited to):
1. Unnecessary items	1.1 Non-recyclable materials 1.2 Pictures, posters and other materials not related to work activity 1.3 Unserviceable tools and equipment 1.4 Waste materials
2. Identification marks	2.1 Color coding 2.2 Labels 2.3 Tags
3. Minor repairs	3.1 Application of lubricants 3.2 Replacement of parts 3.3 Sharpening of tools 3.4 Tightening of nuts, bolts and screws
4. Decorum	4.1 Behavior 4.2 Company/office rules and regulations 4.3 Company/office uniform
<b>Evidence Guide</b> The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.	
1. Critical aspects of competency	1.1 Sorted and removes unnecessary items 1.2 Arranged items 1.3 Maintained work area, tools and equipment 1.4 Followed standardized work process and procedures 1.5 Performed work spontaneously
2. Underpinning knowledge	2.1 Environmental requirements relative to work safety 2.2 Principles of 5S 2.3 Reading skills required to interpret instructions 2.4 Work process and procedures 2.5 Work-related documentation requirements
3. Underpinning skills	3.1 Arranging items 3.2 Maintaining work area, tools and equipment 3.3 Following standardizing work process
4. Underpinning attitude	1.1 Commitment to occupational health and safety 1.2 Promptness in carrying out activities 1.3 Sincere and honest to duties 1.4 Environmental concerns 1.5 Eagerness to learn 1.6 Tidiness and timeliness 1.7 Respect for rights of peers and seniors in workplace 1.8 Communication with peers and seniors in workplace

2. Resource implications	<p>The following resources must be provided:</p> <p>5.1 work place procedure</p> <p>5.2 materials relevant to the proposed activity</p> <p>5.3 all tools, equipment, material and documentation required.</p> <p>5.4 relevant specifications or work instructions</p>
6. Methods of assessment	<p>Methods of assessment may include but not limited to:</p> <p>3.1 written test</p> <p>3.2 demonstration</p> <p>3.3 oral questioning</p> <p>3.4 portfolio</p>
4. Context of assessment	<p>7.1 Competency assessment must be done in a training center or in an actual or simulated work place after Completion of the training module</p> <p>7.2 Assessment should be done by NSDA certified assessor</p>
<p><b>Accreditation Requirements</b></p> <p>Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under BNQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA</p>	

## **Sector Specific Unit of Competencies**

<b>Unit Code and Title</b>	<b>SU-CER-01-L1-V1: Interpret the Knowledge to Work in the Ceramic Sector</b>
<b>Unit Descriptor</b>	<p>This unit covers the knowledge, skills and attitudes required to work in the Ceramic Industry.</p> <p>It specifically includes the tasks of interpreting job roles and responsibilities, identifying and observing OSH in the manufacturing industries, planning work activities and working with others.</p>
<b>Nominal Hours</b>	<b>20 Hours</b>
<b>Elements of Competency</b>	<p><b>Performance Criteria</b></p> <p><b><u>Bold and Underlined</u></b> terms are elaborated in the Range of Variables</p>
1. Interpret job roles and responsibilities	<p>1.1 Job roles and responsibilities in the manufacturing industry are interpreted;</p> <p>1.2 Relationship within the manufacturing industry employees is identified;</p>
2. Identify and observe OSH in the manufacturing industries	<p>2.1. OSH in the manufacturing industries is identified and observed;</p> <p>2.2. Safe work practices are followed when using equipment in the work environment;</p>
3. Plan work activities	<p>3.1 Common goals, objectives and tasks are interpreted and clarified with appropriate persons;</p> <p>3.2 Individual tasks are determined and agreed on according to workplace environment;</p>
4. Work with others	<p>4.1 <b><u>Effective interpersonal skills</u></b> are applied to interact with others and to contribute to activities and objectives;</p> <p>4.2 Assigned tasks are performed in accordance with job requirements, specifications and workplace environment;</p> <p>4.3 <b><u>Work requirements</u></b> are confirmed with colleagues;</p>
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range (may include but not limited to):</b>
Effective interpersonal skills	<p>1.1 Basic listening and speaking skills, use terminology and jargon</p> <p>1.2 Communication and receiving feedback</p> <p>1.3 Interpretation of instructions</p> <p>1.4 Basic principles of effective communication</p>
2. Work requirements	<p>2.1 Work requirements as directed in verbal or written in specifications or procedures</p>
<b>Evidence Guide</b>	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency	
1. Critical Aspects of Competency	<p>1. 1 Followed job role accordance with industries requirement.</p> <p>1. 2 Developed relationship with industries fellow</p> <p>1. 3 Identified different types of Hazards</p> <p>1. 4 Used PPE</p> <p>1. 5 Applied effective interpersonal skills to achieve the goals of industry.</p>

2. Underpinning Knowledge	2.1 Key duties/responsibilities of Manufacturing technician 2.2 Responsibilities of Supervisors 2.3 Responsibilities of Employers 2.4 Responsibilities of Workers 2.5 Common Hazards 2.6 Ways to reduce the risk 2.7 Common goals of the manufacturing Industry
3. Underpinning Skills	3.1 Improving Employee Employer Relationships 3.2 Creating a Positive Relationship with Employees 3.3 Observing OHS in manufacturing industry 3.4 Identifying OHS policies and procedures 3.5 Following personal work safety practices 3.6 Reporting hazards and risks 3.7 Responding to emergency procedures 3.8 Maintaining physical well-being in the workplace
4. Required Attitudes	4.1 Commitment to occupational health and safety 4.2 Promptness in carrying out activities 4.3 Sincere and honest to duties 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect for rights of peers and seniors in workplace 4.8 Communication with peers and seniors in workplace
5. Resource Implications	The following resources must be provided: 5.1 Workplace 5.2 Tools and equipment appropriate to workplace 5.3 Materials relevant to the proposed activity 5.4 Equipment and outfits appropriate in applying safety measures 5.5 OHS Policies and Procedures
6. Methods of Assessment	Methods of assessment may include but not limited to: 6.1 Written Test 6.2 Demonstration 6.3 Oral Questioning 6.4 Portfolio
7. Context of Assessment	7.1 Competency assessment must be done in a training center or in an actual or simulated workplace after completion of the training module. 7.2 Assessment should be done by an NSDA certified/nominated assessor

### **Accreditation Requirements**

Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under BNQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.

<b>Unit Code and Title</b>	<b>SU-CER-02-L1-V1: Use Measuring and Checking Tools and Instruments</b>
<b>Unit Descriptor</b>	<p>This unit covers the knowledge, skills and attitudes required to use measuring and checking tools and instruments.</p> <p>It includes the tasks of preparing with OSH practices, selecting the job, selecting measuring and checking tools and instruments, taking and checking measurements, recording measurements, cleaning and storing measuring and checking instruments.</p>
<b>Nominal Hours</b>	<b>20 Hours</b>
<b>Elements of Competency</b>	<p><b>Performance Criteria</b>  <b><u>Bold &amp; Underlined</u></b> terms are elaborated in the range of variables</p>
1. Prepare for work	<p>1.1 Safe work practices are observed and <b><u>Personal Protective Equipment (PPE)</u></b> worn as required for the work performed.</p> <p>1.2 <b><u>Hazards</u></b> are identified and risks are minimized and controlled.</p> <p>1.3 <b><u>Measuring and checking tools and instruments</u></b> are selected and collected for use.</p>
2. Select the job to be measured and checked	<p>2.1 Jobs to be measured are identified</p> <p>2.2 Jobs to be checked are identified</p> <p>2.3 <b><u>Documents</u></b> and specifications are interpreted</p>
3. Select measuring and checking tools and instruments	<p>3.1 Measuring and checking instrument are selected according to job requirements</p> <p>3.2 Tolerance and/or clearance, limits are interpreted from the drawing</p>
4. Take and check measurements	<p>4.1 Measuring and checking instruments are calibrated to ensure accurate reading/measurement</p> <p>4.2 <b><u>Routine adjustments</u></b> are done as required</p> <p>4.3 <b><u>Measurements</u></b> are taken precisely/accurately as per supplied drawing or manual</p> <p>4.4 Measurements are checked against job requirement.</p>
5. Measurements are recorded and communicated	<p>5.1 Measurements are recorded on form/drawings/sketches as per company procedures</p> <p>5.2 Recorded measurements are interpreted and communicated to supervisor</p>
6. Clean and store measuring and checking instruments	<p>6.1 Measuring and checking instruments are cleaned</p> <p>6.2 Measuring instruments are stored as per industry procedure.</p>
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. Personal Protective Equipment (PPE)	<p>1.1 Safety shoes</p> <p>1.2 Safety belt</p> <p>1.3 Goggles</p>

	1.4 Hand gloves 1.5 Safety helmet 1.6 Overall apron 1.7 Safety Mask 1.8 Ear plug
2. Hazards	2.1 Physical hazard 2.2 Chemical hazard 2.3 Electrical and mechanical hazard 2.4 Biological hazard 2.5 Ergonomic hazard
3. Measuring and checking tools and instruments	<b>3.1 Measuring tools</b> <ul style="list-style-type: none"> <li>▪ Measuring tape</li> <li>▪ Slide/Vernier Calipers</li> <li>▪ Steel Rules</li> <li>▪ Micrometer</li> <li>▪ Combination square set</li> <li>▪ Vernier Height gauge</li> <li>▪ Depth gauge</li> <li>▪ Dial indicator</li> </ul> <b>3.2 Checking tools</b> <ul style="list-style-type: none"> <li>▪ inside calipers</li> <li>▪ outside calipers</li> <li>▪ Filler gauge</li> <li>▪ Thread gauge</li> <li>▪ Divider</li> <li>▪ Plug gauge</li> <li>▪ Snap gauge</li> <li>▪ Ring gauge</li> </ul> <b>3.3 Measuring instruments</b> <ul style="list-style-type: none"> <li>▪ I One Pro</li> <li>▪ Air Flow meter</li> <li>▪ Water Flow meter</li> <li>▪ Digital Venturi meter</li> <li>▪ Pressure gauge</li> <li>▪ Gloss meter</li> <li>▪ Stop watch</li> <li>▪ Magnetic pressure gauge</li> <li>▪ Spirit level</li> <li>▪ Weighing scale</li> <li>▪ Tension measuring meter</li> </ul>
4. Documents	4.1 Drawings 4.2 Sketches 4.3 Technical manuals



	4.4 Specifications 4.5 Written instructions
5. Routine adjustment	5.1 Calibration 5.2 Simple zeroing 5.3 Scale adjustment 5.4 Reference adjustment
6. Measurements	6.1 Measuring length 6.2 Thread pitch 6.3 Angle 6.4 Diameter 6.5 Clearances 6.6 Time 6.7 Temperature 6.8 Fluid Flow 6.9 RPM/Speed 6.10 Glossing
<b>Evidence Guide</b> The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	1.1 Followed OSH practices 1.2 Identified the proper graduated measuring instrument 1.3 Took measurement 1.4 Recorded measurement 1.5 Interpreted written inspection.
2. Underpinning knowledge	2.1 Relevant OSH. 2.2 Principles of using different graduated measuring instruments. 2.3 Workplace standard. 2.4 Sequence of using the instruments. 2.5 Maintaining rules of instruments. 2.6 Methods of using instruments 2.7 Calibration of instrument
3. Underpinning skill	3.1 Practicing workplace safety 3.2 Using PPE 3.3 Using of instruments 3.4 interpreting and following data sheet, instruction and manuals, technical drawing 3.5 Performing measurement 3.6 Checking for conformance to specification 3.7 Keeping record and report 3.8 Calibrating of instrument
4. Underpinning attitudes	4.1 Commitment to occupational health and safety 4.2 Environmental concerns 4.3 Eagerness to learn

	4.4 Tidiness and timeliness 4.5 Respect for rights of peers and seniors in workplace
5. Resource implications	5.1 Adequate workplaces 5.2 Materials for proposed activities 5.3 Measuring and checking tools and instruments appropriate to propose activities 5.4 Information and documentation 5.5 Manual, Codes, Standards and reference materials
6. Methods of assessment	6.1 Demonstration 6.2 Oral questioning 6.3 Written test 6.4 Portfolio
7. Context of assessment	7.1 Competency assessment must be done in a training center or in an actual or simulated work place after Completion of the training module 7.2 Assessment should be done by NSDA certified assessor
<b>Accreditation Requirements</b> Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under BNQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA	

## **Occupation Specific Unit of Competencies**

Unit Code and Title	OU-CER-DDP-01-L1-V1: Perform Decal Decoration
Unit Descriptor	<p>This unit covers the knowledge, skills and attitudes required to perform decal decoration.</p> <p>It includes following OSH practices, preparing ware and decal, applying decal on raw products and with ambush powder on raw products, rectifying routine problems and cleaning and maintaining work area, tools and equipment.</p>
Nominal Hours	75 Hours
Elements of Competency	<p><b>Performance Criteria</b>  <b><u>Bold &amp; Underlined</u></b> terms are elaborated in the Range of Variables</p>
1. Follow OSH practices	<p>1.1 All safety requirements / regulations are adhered to before, during and after use.</p> <p>1.2 Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.</p> <p>1.3 <b><u>Personal Protective Equipment (PPE)</u></b> is worn and Occupational Safety and Health (OSH) instructions are followed according to job specification.</p>
2. Prepare ware and decal	<p>2.1 <b><u>Ware</u></b> is collected as per instruction/specification.</p> <p>2.2 Decal is selected and collected as per job requirement.</p> <p>2.3 Wares are wiped with cotton cloth as required.</p> <p>2.4 Defected wares are rectified or rejected as per enterprise procedure.</p> <p>2.5 Decal is cut of as per design/motif.</p> <p>2.6 Decal and ware are kept in the dust free place with required temperature.</p>
3. Apply decal on raw products	<p>3.1 Decal is dipping in the water tray as per specification.</p> <p>3.2 Decal is separated from transfer paper.</p> <p>3.3 Water is applied on ware as required.</p> <p>3.4 Decal is set on ware with specific position as per instruction.</p> <p>3.5 Decal is squeezed for removing air &amp; water from the ware.</p> <p>3.6 Ware is dried as required.</p> <p>3.7 Ware is transferred for next action as per instruction</p> <p>3.8 Production process is monitored and remedies the problem if any.</p>

4. Apply decal with ambush powder on raw products	4.1 Decal is dipped in the water tray as per specification. 4.2 Water is applied on ware as required. 4.3 Decal is separated from transfer paper. 4.4 Ambush powder is applied on ware and dried as per instruction. 4.5 Decal is set on ware with specific position as per instruction. 4.6 Decal is squeezed for removing air & water from the ware. 4.7 Ware is dried as required and transferred for next action as per instruction. 4.8 Production process is monitored and remedies the problem if any.
5. Rectify routine problems	5.1 Decal <b>faults</b> are identified and rectified that can occur during the process in accordance with specification. 5.2 Records and log books are maintained as per instruction. 5.3 Non-routine problems are identified and reported to designated person.
6. Clean and maintain work area, tools and equipment	6.1 <b>Tools and equipment</b> are cleaned, maintained and stored as per workplace procedures. 6.2 Faulty and defective equipment are tagged and reported in accordance with workplace procedures. 6.3 Work area is cleared and waste materials are removed in accordance with workplace standards.
<b>Range of Variables</b>	
Variable	Range (may include but not limited to:)
1. Personal Protective Equipment (PPE)	1.1 Chemical mask 1.2 Apron 1.3 Hand gloves
2. Ware	2.1 Tiles 2.2 Table ware 2.3 Sanitary ware
3. Faults	3.1 Decal size 3.2 Decal <i>cover</i> coat dryness 3.3 Remaining water and air under decal 3.4 Printing displacement

4. Tools	4.1 Cutter 4.2 Scissor 4.3 Brush 4.4 Squeeze rubber 4.5 Eye glass 4.6 Measuring wooden scale 4.7 Pen 4.8 Wheel 4.9 Colour tray 4.10 Rubber stamp 4.11 Stamp pad 4.12 Ink spatula 4.13 Squeeze rubber 4.14 Water tray 4.15 Blade
5. Equipment	5.1 Tension machine 5.2 Air compressor 5.3 Coating machine 5.4 UV Exposure machine 5.5 Screen washing machine 5.6 Dryer 5.7 Conveyor 5.8 Colour tray 5.9 Spray gun 5.10 Spray booth 5.11 Colour mixer 5.12 Sieve 5.13 Drying chamber 5.14 Shelf 5.15 Weighing scale 5.16 Table
<b>Evidence Guide</b> The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.	
1. Critical aspects of competency	Assessment required evidences that the candidate: 1.1 followed OSH practices 1.2 prepared ware and decal 1.3 applied decal on raw products 1.4 applied decal with ambush powder on raw products 1.5 rectified routine problems 1.6 cleaned and maintained work area, tools and equipment

2. Underpinning knowledge	2.1 Decal application techniques. 2.2 Decal properties. 2.3 Types of ware 2.4 Properties of transfer paper. 2.5 Properties of ambush powder. 2.6 Causes of faults. 2.7 Colour sequences
3. Underpinning skills	3.1 Cutting decal. 3.2 Separating decal from paper. 3.3 Setting decal. 3.4 Squeezing decal. 3.5 Applying ambush powder. 3.6 Monitoring production process. 3.7 Maintaining log book and records. 3.8 Maintaining and storing tools and equipment.
4. Required attitudes	4.1 Commitment to occupational safety and health. 4.2 Promptness in carrying out activities. 4.3 Sincere and honest to duties. 4.4 Eagerness to learn. 4.5 Tidiness and timeliness. 4.6 Environmental concerns. 4.7 Respect for rights of peers and seniors at workplace. 4.8 Communication with peers and seniors at workplace
5. Resource implication	The following resources must be provided: 5.1 workplace (actual or simulated); 5.2 tools, equipment and physical facilities appropriate to perform activities; and 5.3 materials, consumables to perform activities.
6. Methods of assessment	Methods of assessment may include but not limited to: 6.1 1 written test; 6.2 demonstration; 6.3 oral questioning; and 6.4 portfolio.
7. Context of assessment	7.1 Competency assessment must be done in a training center or in an actual or simulated work place after Completion of the training module 7.2 Assessment should be done by NSDA certified assessor

**Accreditation Requirements**

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Unit Code and Title	<b>OU-CER-DDP-02-L2-V1: Carryout Hand Painting</b>
Unit Descriptor	<p>This unit covers the knowledge, skills and attitudes required to perform hand painting.</p> <p>It includes following OSH, preparing colour for painting, painting objectives on wheel and by hand, rectifying routine problems and cleaning and maintaining work area, tools and equipment.</p>
Nominal Hours	80 Hours
Elements of Competency	<p>Performance Criteria</p> <p><b><u>Bold &amp; Underlined</u></b> terms are elaborated in the Range of Variable</p>
1. Follow OSH	<p>1.1 All safety requirements / regulations are adhered to before, during and after use.</p> <p>1.2 Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.</p> <p>1.3 <b><u>Personal Protective Equipment (PPE)</u></b> is worn and Occupational Safety and Health (OSH) instructions are followed according to job specification.</p>
2. Prepare colour or painting	<p>2.1 Painting <b><u>tools, equipment</u></b> and <b><u>materials</u></b> are collected.</p> <p>2.2 <b><u>Reagent</u></b> are mixed with colour and prepared colour paste to adapt for painting as per job specification.</p> <p>2.3 Ware is collected as per instruction / specification.</p> <p>2.4 Rubber stamp is collected as per specification.</p> <p>2.5 <b><u>Brush</u></b> is collected as per Job requirement.</p>
3. Paint objects on wheel	<p>3.1 Product is set on centre of wheel as required.</p> <p>3.2 Wheel is rotated as required.</p> <p>3.3 Colour is taken by brush.</p> <p>3.4 Brush is used as per standard procedure.</p> <p>3.5 Object is painted as per design and specific colour.</p> <p>3.6 Painted object is kept on shelf and sent to the next operation.</p>
4. Paint objects by hand	<p>4.1 Design is stamped on object as per specification.</p> <p>4.2 Colour is taken by brush.</p> <p>4.3 Brush or pen is used as per standard procedure.</p> <p>4.4 Object is painted according to stamped design as per specific colour.</p> <p>4.5 Painted object is kept on shelf and sent to the next operation.</p>

5. Rectify routine problems	<p>5.1 <b>Faults</b> are identified and rectified that can occur during the operation in accordance with enterprise procedure.</p> <p>5.2 Records and log books are maintained.</p> <p>5.3 Non-routine problems are identified and reported to designated person.</p>
6. Clean and maintain work area, tools and equipment	<p>6.1 Tools and equipment are cleaned, maintained and stored as per workplace procedures.</p> <p>6.2 Faulty and defective equipment is tagged and reported in accordance with workplace procedures.</p> <p>6.3 Work area is cleared and waste materials are removed in accordance with workplace standards.</p>
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (may include but not limited to:)
1. Personal Protective Equipment (PPE)	<p>1.1 Chemical mask</p> <p>1.2 Safety glasses / goggles</p> <p>1.3 Gloves</p> <p>1.4 Apron</p> <p>1.5 Hair net</p>
2. Tools and equipment	<p>2.1 Brush</p> <p>2.2 Pen</p> <p>2.3 Wheel</p> <p>2.4 Colour tray</p> <p>2.5 Rubber stamp</p> <p>2.6 Stamp pad</p> <p>2.7 Weighing balance</p> <p>2.8 Colour mixture machine</p> <p>2.9 Ink spatula</p>
3. Materials	<p>3.1 Different colour</p> <p>3.2 Deco flux</p> <p>3.3 Precious metal</p> <ul style="list-style-type: none"> <li>▪ Gold</li> <li>▪ Platinum</li> </ul> <p>3.4 Luster</p> <p>3.5 Opaque</p> <p>3.6 Cotton cloth</p>
4. Reagent	<p>4.1 Solvent</p> <p>4.2 Water</p> <p>4.3 Gum</p> <p>4.4 Thinner</p>

5. Faults	5.1 Thin applica <del>on</del> 5.2 Thick application 5.3 Matt 5.4 Cra <del>z</del> ing 5.5 Rolling 5.6 Craw <del>l</del> ing 5.7 Over <del>l</del> apping
<b>Evidence Guide</b> The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.	
1. Critical aspects of competency	Assessment required evidences that the candidate: 1.1 followed OSH 1.2 prepared colour or painting 1.3 painted objects on wheel 1.4 painted objects by hand 1.5 rectified routine problems 1.6 cleaned and maintained work area, tools and equipment
2. Underpinning knowledge	2.1 Colour properties. 2.2 Design concept. 2.3 Measurement concept. 2.4 Reagent mixing ratio. 2.5 List of tools and equipment 2.6 Materials 2.7 Faults
3. Underpinning skills	3.1 colour making procedure 3.2 Mixing reagent. 3.3 Centering objects. 3.4 Operating wheel. 3.5 Using brush. 3.6 Painting objects. 3.7 Identifying and rectifying faults.
4. Required attitudes	4.1 Commitment to occupational safety and health. 4.2 Promptness in carrying out activities. 4.3 Sincere and honest to duties. 4.4 Eagerness to learn. 4.5 Tidiness and timeliness. 4.6 Environmental concerns. 4.7 Respect for rights of peers and seniors at workplace. 4.8 Communication with peers and seniors at workplace.

5. Resource implication	<p>The following resources must be provided:</p> <p>5.1 workplace (actual or simulated);</p> <p>5.2 tools, equipment and physical facilities appropriate to perform activities; and</p> <p>5.3 materials, consumables to perform activities.</p>
6. Methods of assessment	<p>Methods of assessment may include but not limited to:</p> <p>6.1 written test;</p> <p>6.2 demonstration;</p> <p>6.3 oral questioning; and</p> <p>6.4 portfolio.</p>
7. Context of assessment	<p>7.1 Competency assessment must be done in a training center or in an actual or simulated work place after Completion of the training module</p> <p>7.2 Assessment should be done by NSDA certified assessor</p>
<p><b>Accreditation Requirements</b></p> <p>Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under BNQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA</p>	

Unit Code and Title	<b>OU-CER-DDP-03-L2-V1: Conduct Spray Painting</b>
Unit Descriptor	<p>This unit covers the knowledge, skills and attitudes required to perform spray painting.</p> <p>It includes following OSH practices, preparing for spraying, spraying to objects, rectifying routine problems and cleaning and maintaining work area, tools and equipment.</p>
Nominal Hours	80 Hours
Elements of Competency	<p>Performance Criteria</p> <p><b><u>Bold &amp; Underlined</u></b> terms are elaborated in the Range of Variable</p>
1. Follow OSH practices	<p>1.1 All safety requirements / regulations are adhered to before, during and after use.</p> <p>1.2 Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.</p> <p>1.3 <b><u>Personal Protective Equipment (PPE)</u></b> is worn and Occupational Safety and Health (OSH) instructions are followed.</p>
2. Prepare for spraying	<p>2.1 Spray booth is prepared as per standard requirement.</p> <p>2.2 Spraying <b><u>tools, equipment and materials</u></b> are collected as per job requirement.</p> <p>2.3 Wares collected as per instruction.</p> <p>2.4 Wares wiped with cotton cloth as required.</p> <p>2.5 <b><u>Reagent</u></b> are mixed with colour and prepared colour paste to adapt for spraying as per job specification.</p> <p>2.6 Mixed colour is sieved as per specification.</p> <p>2.7 Compressor and exhaust system is checked.</p> <p>2.8 Spray gun is set and colour is poured as required.</p>
4. Spray to objects (Table and sanitary ware)	<p>3.1 Product is set on work station as required.</p> <p>3.2 Colour is sprayed on product with spray gun as per workplace procedure.</p> <p>3.3 Wares dried as required.</p> <p>3.4 Colour of excess portion of the ware is wiped out by sponge in accordance with product specification.</p> <p>3.5 Colour application is constantly checked against sample.</p> <p>3.6 Faults are identified and rectified as required.</p> <p>3.7 Sprayed product is kept on trolley and sent to next operation.</p>

4. Rectify routine problems	<p>4.1 Faults are identified and rectified that <i>can</i> occur during the operation in accordance with enterprise procedure.</p> <p>4.2 Records and log books are maintained.</p> <p>4.3 Non-routine problems are identified and reported to designated person.</p>
5. Clean and maintain work area, tools and equipment	<p>5.1 Tools and equipment are cleaned, maintained and stored as per workplace procedures.</p> <p>5.2 Faulty and defective equipment is tagged and reported in accordance with workplace procedures.</p> <p>5.3 Work area is cleared and waste materials are removed in accordance with workplace standards.</p>
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range (may include but not limited to:)</b>
1. Personal Protective Equipment (PPE)	<p>1.1 Chemical mask</p> <p>1.2 Safety glasses/goggles</p> <p>1.3 Gloves</p> <p>1.4 Apron</p> <p>1.5 Hair net</p>
2. Tools and equipment	<p>2.1 Conveyor</p> <p>2.2 Colour tray</p> <p>2.3 Spray gun</p> <p>2.4 Spray booth</p> <p>2.5 Weighing balance</p> <p>2.6 Colour mixer</p> <p>2.7 Sieve</p> <p>2.8 Drying chamber</p>
3. Materials	<p>3.1 Different colour</p> <p>3.2 Deco flux</p> <p>3.3 Cotton cloth</p> <p>3.4 Cotton cloth</p> <p>3.5 Different types of ceramic colour in powder form</p> <p>3.6 Printing medium</p> <p>3.7 Opaque</p>
4. Reagent	<p>4.1 Solvent</p> <p>4.2 Water</p> <p>4.3 Gum</p>

**Evidence Guide**

The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.

1. Critical aspects of competency	Assessment required evidences that the candidate: 1.1 followed osh practices 1.2 prepared for spraying 1.3 sprayed to objects 1.4 rectified routine problems 1.5 cleaned and maintained work area, tools and equipment
2. Underpinning knowledge	2.1 Colour properties. 2.2 Spray technique. 2.3 Air pressure. 2.4 Measurement concept. 2.5 Reagent mixing ratio. 2.6 Spray gun operation procedure.
3. Underpinning skills	3.1 Mixing colour and reagent. 3.2 Operating spray gun. 3.3 Operating air compressor. 3.4 Wiping out colour of excess portion of the ware. 3.5 Checking colour application constantly. 3.6 Identifying faults.
4. Required attitudes	4.1 Prompt Commitment to occupational safety and health. 4.2 Carefulness in carrying out activities. 4.3 Sincere and honest to duties. 4.4 Eagerness to learn. 4.5 Tidiness and timeliness. 4.6 Environmental concerns. 4.7 Respect for rights of peers and seniors at workplace. 4.8 Communication with peers and seniors at workplace.
5. Resource implication	The following resources must be provided: 5.1 workplace (actual or simulated); 5.2 tools, equipment and physical facilities appropriate to perform activities; and 5.3 materials, consumables to perform activities.
6. Methods of assessment	Methods of assessment may include but not limited to: 6.1 written test; 6.2 demonstration; 6.3 oral questioning; and 6.4 portfolio.

7. Context of assessment	<p>7.1 Competency assessment must be done in a training center or in an actual or simulated work place after Completion of the training module</p> <p>7.2 Assessment should be done by NSDA certified assessor</p>
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### **Accreditation Requirements**

Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under BNQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA



Unit Code and Title	OU-CER-DDP-04-L1-V1: Prepare Screen for Printing
Unit Descriptor	<p>This unit covers the knowledge, skills and attitudes required to make screen.</p> <p>It includes following OSH practices, preparing for work, setting screen equipment in tension machine, preparing screen, rectify routine problems and cleaning and maintaining work area, tools and equipment.</p>
Nominal Hours	50 Hours
Elements of Competency	<p>Performance Criteria</p> <p><b><u>Bold &amp; Underlined</u></b> terms are elaborated in the Range of Variable</p>
1. Follow OSH practices	<p>1.1 All safety requirements / regulations are adhered to before, during and after use.</p> <p>1.2 Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.</p> <p>1.3 <b><u>Personal Protective Equipment (PPE)</u></b> is worn and Occupational Safety and Health (OSH) instructions are followed according to job specification.</p>
2. Prepare for work	<p>2.1 Screen <b><u>materials</u></b> are collected as per job requirement</p> <p>2.2 <b><u>Machines</u></b> are prepared as required.</p> <p>2.3 Machines are run as per operating procedure.</p>
3. Set screen equipment in tension machine	<p>3.1 Frame is set in tension machine.</p> <p>3.2 Bolting cloth is set in the frame as per specification.</p> <p>3.3 Bond is applied and dried following standard procedure.</p> <p>3.4 Bolting cloth rim is cut off and gum tape is applied.</p> <p>3.5 Screen is <b><u>labeled</u></b> as per product specification.</p>
4. Prepare screen	<p>4.1 Emulsion coat is applied and screen is dried as per required.</p> <p>4.2 Positive film is set on screen as per required measurement.</p> <p>4.3 Screen is exposed by UV Exposure machine.</p> <p>4.4 Screen is <b><u>washed and dried by dryer</u></b> as required.</p>
5. Rectify routine problems	<p>5.1 Faults are identified and rectified that can occur during the operation in accordance with work instructions.</p> <p>5.2 Non-routine problems are identified and reported to designated person.</p>

6. Clean and maintain work area, tools and equipment	6.1 <b>Tools</b> and equipment are cleaned, maintained and stored as per workplace procedures. 6.2 Faulty and defective equipment is tagged and reported in accordance with workplace procedures. 6.3 Work area is cleared and waste removed following workplace procedures. 6.4 Waste materials are removed in accordance with workplace standards.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (may include but not limited to)
1. Personal Protective Equipment (PPE)	1.1 Chemical mask 1.2 Safety glasses / goggles 1.3 Gloves 1.4 Apron
2. Materials	2.1 Screen frame 2.2 Screen mesh 2.3 Adhesive 2.4 Gum tape 2.5 Emulsion coat 2.6 Positive film 2.7 Water 2.8 Solvent
3. Machine	3.1 Tension machine 3.2 Air compressor 3.3 Coating machine 3.4 UV Exposure machine 3.5 Screen washing machine 3.6 Dryer
4. Tools	4.1 Cutter 4.2 Scissor 4.3 Brush 4.4 Squeeze rubber 4.5 Eye glass 4.6 Measuring wooden scale
<b>Evidence Guide</b> The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.	

1. Critical aspects of competency	<p>Assessment required evidences that the candidate:</p> <ol style="list-style-type: none"> <li>1.1 set screen mesh in the frame;</li> <li>1.2 applied emulsion coat and dried screen;</li> <li>1.3 set positive film on screen; and</li> <li>1.4 exposed screen.</li> </ol>
2. Underpinning knowledge	<ol style="list-style-type: none"> <li>2.1 Machine operation procedure.</li> <li>2.2 Features of UV ray.</li> <li>2.3 Screen properties.</li> <li>2.4 Mesh measurement techniques.</li> <li>2.5 Emulsion coating materials properties.</li> <li>2.6 Tension.</li> <li>2.7 Washing procedure.</li> </ol>
3. Underpinning skills	<ol style="list-style-type: none"> <li>3.1 Operating machine.</li> <li>3.2 Setting screen.</li> <li>3.3 Applying coating.</li> <li>3.4 Performing exposure of film.</li> <li>3.5 Drying screen.</li> <li>3.6 Setting positive film.</li> <li>3.7 Washing screen.</li> </ol>
4. Required attitudes	<ol style="list-style-type: none"> <li>4.1 Commitment to occupational safety and health.</li> <li>4.2 Promptness in carrying out activities.</li> <li>4.3 Sincere and honest to duties.</li> <li>4.4 Eagerness to learn.</li> <li>4.5 Tidiness and timeliness.</li> <li>4.6 Environmental concerns.</li> <li>4.7 Respect for rights of peers and seniors at workplace.</li> <li>4.8 Communication with peers and seniors at workplace.</li> </ol>
5. Resource implication	<p>The following resources must be provided:</p> <ol style="list-style-type: none"> <li>5.1 Workplace (actual or simulated);</li> <li>5.2 Tools, equipment and physical facilities appropriate to perform activities; and</li> <li>5.3 Materials, consumables to perform activities.</li> </ol>
6. Methods of assessment	<p>Methods of assessment may include but not limited to:</p> <ol style="list-style-type: none"> <li>6.1 written test;</li> <li>6.2 demonstration;</li> <li>6.3 oral questioning; and</li> <li>6.4 portfolio.</li> </ol>

7. Contexts of assessment	<p>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</p> <p>7.2 Assessment should be done by a BTEB certified assessor.</p>
<p><b>Accreditation Requirements</b></p> <p>Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	



## **References**

1. Competency Standard on Design, Decoraion & Printing, BTEB

## Development of Competency Standard

The Competency Standards for National Skills Certificate Level-1 in Design, Decoration & Printing is developed by NSDA on 25 September, 2024.

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## Validation of Competency Standard

The Competency Standards for National Skills Certificate Level-1 in Design, Decoration & Printing is Validated by NSDA on 30 September, 2024.

### List of the members

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