# National Technical and Vocational Qualifications Framework

# NTVQF

For the control of th



Bangladesh Technical Education Board (BTEB)
Agargaon, Sher-E-Bangla Nagar, Dhaka-1207

#### Copyright

The National Competency Standard for "Decoration and Printing" is a referral document for the development of curricula, teaching and learning materials, and assessment tools. It also serves as the base document for providing trainings consistent with existing quality assurance systems. This document is owned by the Government of the People's Republic of Bangladesh. All Bangladesh National Public and Private Institutions may use the information without restriction for activities benefitting Bangladesh. Other interested parties must obtain permission from the owner of this document for reproduction of information in any manner in whole or in part of this Skills Standard, in English or other languages.

This document is available on a cost recovery basis at:

Bangladesh Technical Education Board (BTEB),

Agargaon, Sher-E-Bangla Nagar, Dhaka -1207, Bangladesh

Telephone: +88 02 812 2056; Fax: +88 02 811 3345

E-mail: bteb@citech.net;

Website: www.bteb.gov.bd; www.btebcbt.gov.bd

#### **Contents**

Copyright	2
Contents	3
Introduction	4
Bangladesh NTVQF with Job Classifications	5
List of Abbreviation	
The Qualification of the Competency Standards	
Course Structure	
Course Structure – Level - I	
Course Structure – Level - III	15
The Generic Competencies	
Use Basic Mathematical Concepts	
Apply Occupational Safety and Health (OSH) Practices at Workplace	21
Operate in a Self-directed Team	
Present and Apply Workplace Information	
Demonstrate Work Values	
Perform Computer Operations	
Lead Small Team	
The Sector Specific Competencies	48
Work in the Ceramic Industry	
Use Measuring Tools and Equipment	
Handle Dangerous Goods / Hazardous Substances	55
Participate in Environmentally Sustainable Work Practices	
Read and Interpret Work Documents  The Occupational Specific Competencies	
Perform Decal Decoration	
Perform Hand Painting	
Perform Spray Painting	
Perform Screen Printing	
Make Decal	
Prepare Colour and Paste	90
Operate Digital Printing Machine	94
Store Decoration Raw Materials	
Monitor and Control Defects	
Customize Design and Make Positive	
Make Sample Product	
Apply Quality StandardsAcknowledgements	
ACKIDWICUUCIIICIIIS	1 10

#### Introduction

The Technical and Vocational Education and Training (TVET) sector in Bangladesh is now implementing the reform initiatives to strengthen training, assessment and certification. One of the reforms is developing Competency Standards that responds to the needs of the industry both local and international. Strategies include using the existing international standards from Australia and New Zealand, as bases for developing the CS and contextualize it in the Bangladesh context.

Competency Standards are nationally agreed and industry-determined competencies required for effective work performance. These are presented in a consistent format following sequence such as:

- Unit Title
- Unit Code
- Nominal Hours
- Unit Descriptor
- > Elements and Performance Criteria
- Range of Variables
- Evidence Guide

The Competency Standards are the core element for training, assessment and certification of skilled workers. Candidates who are successful in the assessment will receive a qualification in the National Technical and Vocational Qualification Framework (NTVQF).

This document contains Course structures for each qualification. This structure contains the Unit code, unit title and nominal hours for the competencies.

The Unit of Competency for Decoration and Printing were developed by the Technical Sub Committee (TSC) that was established under the Industry Skills Council for Ceramic (ISCF). The members are primarily from industry with representatives from the Bangladesh Technical Education Board (BTEB) and the Directorate of Technical Education (DTE), Workers Association, and Training Institutions involved in this occupation. The Standards and Curriculum Development Committee (SCDC) of BTEB reviewed this document.

The development of Competency Standards was assisted by the Bangladesh Skills for Employment and Productivity Project (B-SEP) funded by the Government of Canada. The B-SEP Project is being implemented by the International Labour organization (ILO) Country Office for Bangladesh in cooperation with the Government of Bangladesh.

Endorsed by Approved by:

Industry Skills Council Bangladesh Technical Education Board (BTEB)

Date: Date:

#### Bangladesh NTVQF with Job Classifications

NTVQF	EDU	Job Classification		
LEVELS	Pre-Vocation Education	Vocational Education	Technical Education	Job Classification
NTVQF 6			Diploma in engineering or equivalent	Middle Level Manager / Sub Assistant Engr. etc.
NTVQF 5		National Skill Certificate 5 (NSC 5)		Highly Skilled Worker / Supervisor
NTVQF 4		National Skill Certificate 4 (NSC 4)		Skilled Worker
NTVQF 3		National Skill Certificate 3 (NSC 3)		Semi-Skilled Worker
NTVQF 2		National Skill Certificate 2 (NSC 2)		Basic Skilled Worker
NTVQF 1		National Skill Certificate 1 (NSC 1)		Basic Worker
Pre-Voc 2	National Pre-Vocation Certificate 2 (NPVC 2)			Pre-Vocation Trainee
Pre-Voc 1	National Pre-Vocation Certificate 1 (NPVC 1)			Pre-Vocation Trainee

The pre-vocational levels prepare the participant for training while learning programs at the various levels of the NTVQF prepare the participant for the workforce.

At the completion of the pre-vocational programs the participants would move into training programs at the NTVQF levels.

#### Annex 1: NTVQF Level Descriptors

NTVQF Level	Knowledge	Skill	Responsibility	Job Class.
6	Comprehensive actual and theoretical knowledge within a specific study area with an awareness of the limits of that knowledge.	Specialised and restricted range of cognitive and practical skills required to provide leadership in the development of creative solutions to defined problems	Mange a team or teams in workplace activities where there is unpredictable change     Identify and design learning programs to develop performance of team members	Supervisor / Middle Level Manager / Sub Assistant Engr. etc.
5	Very broad knowledge of the underlying, concepts, principles, and processes in a specific study area	Very broad range of cognitive and practical skills required to generate solutions to specific problems in one or more study areas.	Take overall responsibility for completion of tasks in work or study Apply past experiences in solving similar problems	Highly Skilled Worker / Supervisor
4	Broad knowledge of the underlying, concepts, principles, and processes in a specific study area	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 information	Take responsibility, within reason, for completion of tasks in work or study Apply past experiences in solving similar problems	Skilled Worker
3	Moderately broad knowledge in a specific study area.	Basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools	Work or study under supervision with some autonomy	Semi-Skilled Worker
2	Basic underpinning knowledge in a specific study area.	Basic skills required to carry out simple tasks	Work or study under indirect supervision in a structured context	Basic Skilled Worker
1	Elementary understanding of the underpinning knowledge in a specific study area.	Limited range of skills required to carry out simple tasks	Work or study under direct supervision in a structured context	Basic Worker
Pre-Voc 2	Limited general knowledge	Very limited range of skills and use of tools required to carry out simple tasks	Work or study under direct supervision in a well-defined, structured context.	Pre-Vocation Trainee
Pre-Voc 1	Extremely limited general knowledge	Minimal range of skills required to carry out simple tasks	Simple work or study exercises, under direct supervision in a clear, well defined structured context	Pre-Vocation Trainee

#### List of Abbreviation

#### General

BSEP Bangladesh Skills for Employability and Productivity

BTEB Bangladesh Technical Education Board

DTE Directorate of Technical Education

ILO International Labour Organization

ISC Industry Skills Council

NPVC National Pre-Vocation Certificate

NTVQF National Technical and Vocational Qualification Framework

SAARC South Asian Association for Regional Cooperation

SCDC Standards and Curriculum Development Committee

TVET Technical and Vocational Education and Training

UoC Unit of Competency

TSC Technical Sub Committee

CER Ceramic

DP Decoration and Printing

#### **Occupation Specific Abbreviations**

OSH Occupational Safety and Health

PPE Personal Protective Equipment

Bangladesh Technical Education Board (BTEB)

#### The Qualification of the Competency Standards

Title of Qualification: National Skill Certificate – I, II, III & IV in     Decoration and Printing in Ceramic Sector					
2. Qualification Code:	CERDEP				
3. Endorsement Date:	20 <sup>th</sup> March, 2017				
	The NSC - I in <b>Decoration and Printing</b> Qualification consists of a set <b>Decoration and Printing</b> works of competencies that a person must achieve in order to work competently in the <b>Ceramic Sector</b> as an <b>Operator Assistant</b> . In particular, he / she should be able to:				
	<ol> <li>Use basic mathematical concepts</li> <li>Apply Occupational Safety and Health (OSH) practices at workplace</li> <li>Work in the ceramic industry</li> <li>Use measuring tools and equipment</li> <li>Perform decal decoration</li> <li>Perform hand painting</li> <li>Perform spray painting</li> </ol>				
4. Purpose of the Qualification	The NSC - II in <b>Decoration and Printing</b> Qualification consists of a set <b>Decoration and Printing</b> works of competencies that a person must achieve in order to work competently in the <b>Ceramic Sector</b> as a <b>Junior Operator</b> .				
	In particular, he / she should be able to:				
	<ol> <li>Use English in the workplace</li> <li>Operate in a self-directed team</li> <li>Present and apply workplace information</li> <li>Handle dangerous good / hazardous substances</li> <li>Make screen</li> <li>Perform screen printing</li> <li>Make decal</li> </ol>				
	The NSC - III in <b>Decoration and Printing</b> Qualification consists of a set <b>Decoration and Printing</b> works of competencies that a person must achieve in order to work competently in the <b>Ceramic Sector</b> as <b>Operator</b> .				
	In particular, he / she should be able to:				
	Perform computer operations     Participate in environmentally sustainable work practices				

	<ul> <li>3. Read and interpret work documents</li> <li>4. Prepare colour and paste</li> <li>5. Operate digital printing machine</li> <li>6. Store decoration raw materials</li> <li>The NSC - IV in Decoration and Printing</li> </ul>				
	Qualification consists of a set <b>Decoration and Printing</b> works of competencies that a person must achieve in order to work competently in the <b>Ceramic Sector</b> as <b>Sr. Operator</b> .				
	In particular, he / she should be able to:				
	<ol> <li>Demonstrate work values</li> <li>Lead small team</li> <li>Monitor and control defects</li> <li>Customize design and make positive</li> <li>Make sample product</li> <li>Apply quality standards</li> </ol>				
5. Regulatory Arrangements	The holder of this qualification should have been assessed by a BTEB certified assessor and found to be competent in the units listed.				
6. Accreditation Requirements	The qualifications shall be offered in compliance with the accreditation requirements set by BTEB.				
7. Transition Arrangements	In the absence of certified assessors, the BTEB shall appoint trainers who have undergone assessment trainings.				
8. Contact for Comments	Chairman Bangladesh Technical Education Board (BTEB) Agargaon, Sher-E-Bangla Nagar, Dhaka - 1207				

#### **Course Structure**

SL		Unit Code and Title				
The	Generic Cor	npete	encies (08 UoCs required)		290	
1.	GN1001A1	Use	Basic Mathematical Concepts	1	40	
2.	GN1002A1		y Occupational Safety and Health (OSH) ctices at Workplace	1	30	
3.	GN2003A1	Use	English in the Workplace	2	70	
4.	GN2004A1	Ope	rate in a Self-directed Team	2	20	
5.	GN2005A1	Pres	ent and Apply Workplace Information	2	30	
6.	GN3006A1	Den	nonstrate Work Values	3	20	
7.	GN3008A1	Perf	orm Computer Operations	3	60	
8.	GN3010A1 Lead Small Team			3	20	
The	Sector Specif	ic Co	mpetencies (05 UoCs required)		110	
1.	CERSS1001	A1	Work in the Ceramic Industry	1	20	
2.	CERSS1002	2A1	Use Measuring Tools and Equipment	1	20	
3.	CERSS2003	(A)	Handle Dangerous Good / Hazardous Substances	2	20	
4.	CERSS3004		Participate in Environmentally Sustainable Work Practices	3	25	
5.	CERSS3005	5A1	Read and Interpret Work Documents	3	25	
The	The Occupation Specific Competencies (13 UoCs required)					
1.	. CERDEP1001A1 Perform Decal Decoration		Perform Decal Decoration	1	100	
2.	CERDEP1002A1		Perform Hand Painting	1	80	
3.	CERDEP100	CERDEP1003A1 Perform Spray Painting		1	80	

4.	CERDEP2004A1	Make Screen	2	50
5.	CERDEP2005A1	Perform Screen Printing	2	60
6.	CERDEP2006A1	Make Decal	2	70
7.	CERDEP3007A1	Prepare Colour and Paste	3	60
8.	CERDEP3008A1	Operate Digital Printing Machine	3	80
9.	CERDEP3009A1	Store Decoration Raw Materials	3	30
10.	CERDEP4010A1	Monitor and Control Defects	4	50
11.	CERDEP4011A1	Customize Design and Make Positive	4	60
12.	CERDEP4012A1	Make Sample Product	4	90
13.	CERGLZ4013A1	Apply Quality Standards	4	30
	Total Nominal Learning Hours			

#### Course Structure - Level - I

SL		Unit Code & Title			Nominal Hours
The Generic Competencies (02 UoCs required)					70
1.	GN1001A1	Use	Basic Mathematical Concepts	1	40
2.	GN1002A1		oly Occupational Safety and Health (OSH) ctices at Workplace	1	30
Th	The Sector Specific Competencies (02 UoC required)				40
1.	CERSS1001	<b>A1</b>	Work in the Ceramic Industry	1	20
2.	2. CERSS1002A1 Use Measuring Tools and Equipment 1			20	
Th	e Occupation	Spe	ecific Competencies (03 UoCs required)		260
1.	CERDEP100	1A1	Perform Decal Decoration	1	100
2.	CERDEP100	2A1	Perform Hand Painting	1	80
3.	CERDEP100	3A1	Perform Spray Painting	1	80
Total Learning Hour					370
On-the Job Training				160	
			Total Nominal Hours		530

#### Course Structure - Level - II

SL		Unit Code & Title			Nominal Hours
Th	The Generic Competencies (03 UoCs required)				
1.	GN2003A1	Use	English in the Workplace	2	70
2.	GN2004A1	Ope	rate in a Self-directed Team	2	20
3.	GN2005A1	Pres	sent and Apply Workplace Information	2	30
The Sector Specific Competencies (01 UoC required)					20
1.	. CERSS2003A1 Handle Dangerous Good / Hazardous 2			20	
The Occupation Specific Competencies (03 UoCs required)					180
1.	CERDEP200	)4A1	Make Screen	2	50
2.	CERDEP200	)5A1	Perform Screen Printing	2	60
3.	3. CERDEP2006A1 Make Decal 2			2	70
Total Learning Hours					320
On-the Job Training				216	
Total Nominal Hours				536	

#### Course Structure - Level - III

SL		Unit Code & Title			
The Generic Competencies (01 UoCs required)					
1.	GN3008A1	Perforn	n Computer Operations	3	60
Th	e Sector Spe	cific C	ompetencies (02 UoC required)		50
1.	I. CERSS3004A1 Participate in Environmentally Sustainable Work Practices 3			25	
2.	CERSS3005A1 Read and Interpret Work Documents 3			3	25
Th	e Occupation	Spec	ific Competencies (03 UoCs required)		170
1.	CERDEP300	7A1	Prepare Colour and Paste	3	60
2.	CERDEP300	8A1	Operate Digital Printing Machine	3	80
3.	CERDEP300	9A1	Store Decoration Raw Materials	3	30
Total Learning Hours				280	
On-the Job Training				216	
			Total Nominal Hours		496

#### Course Structure - Level - IV

SL		Unit Code & Title NTVQF Level			
The Generic Competencies (02 UoC required)					
1.	GN3006A1	Der	monstrate Work Values	3	20
2.	GN3010A1	Lea	ad Small Team	3	20
The Occupation Specific Competencies (04 UoCs required)					230
1.	. CERDEP4010A1 Monitor and Control Defects 4			50	
2.	CERDEP4011A1 Customize Design and Make Positive 4			60	
3.	CERDEP4012	A1	Make Sample Product	4	90
4.	CERGLZ4013	A1	Apply Quality Standards	4	30
Total Learning Hours				270	
On-the Job Training				216	
			Total Nominal Hours		486

The Generic Competencies	

Bangladesh Technical Education Board (BTEB)

# National Technical and Vocational Qualifications Framework for Bangladesh Unit of Competency

Unit Title	Use Basic Mathematical Concepts	
Unit Code	GN100	1A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to use basic mathematical concepts. It includes identifying calculation requirements in the workplace, selecting appropriate mathematical methods for calculation and using mathematical concepts to calculate workplace calculation.	
Nominal Hours	40 Hou	ırs
Flaments of		mance Criteria in italicized terms are elaborated in the Range of es
Identify calculation requirements in the workplace		<ul><li>1.1 Calculation requirements are identified from workplace information.</li><li>1.2 Workplace calculations are interpreted.</li></ul>
Select appropriate     mathematical methods     for calculation		<ul> <li>2.1 Appropriate <i>mathematical methods</i> are selected to carry out the calculation.</li> <li>2.2 <i>System and units of measurement</i> to be followed are determined.</li> </ul>
Use basic     mathematical concepts     to calculate workplace     calculation		<ul> <li>3.1 Calculations are completed using appropriate methods such as addition, subtraction, multiplication and division.</li> <li>3.2 Systems and units of measurement for the task are applied to workplace calculation.</li> </ul>
Range of Variables		
Variable	Rar	nge (may include but not limited to):
1. Workplace information 1.2 0 1.3 0 1.4 7 1.5 0 1.6 I		Project documents Graphs Charts Tables Spread sheets Item price quotations Equipment manuals

2. Mathematical methods	<ul> <li>2.1 Addition</li> <li>2.2 Subtraction</li> <li>2.3 Division</li> <li>2.4 Multiplication</li> <li>2.5 Ratio on any types of real values (such as whole numbers, fractional numbers, percentages, numbers with exponents</li> </ul>
3. System and units of measurement	3.1 Measurement 3.2 Volume 3.3 Weight 3.4 Mass 3.5 Density 3.6 Percentage 3.7 Length / Breadth / Thickness 3.8 Capacity 3.9 Time 3.10 Temperature 3.11 Budget, Pay / Wages, leave entitlements 3.12 Material usage 3.13 Speed 3.14 Costing

#### **Evidence Guide**

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

Critical aspects     of competency	Assessment required evidences that the candidate:  1.1 applied mathematical methods such as addition, subtraction, division and multiplication to workplace calculations.
2. Underpinning knowledge	<ul> <li>2.1 Calculation requirements in the workplace.</li> <li>2.2 Select appropriate mathematical methods.</li> <li>2.3 Equipment and tools required for calculation.</li> <li>2.4 Mathematical language, symbols and terminology.</li> <li>2.5 Application of units.</li> <li>2.6 Workplace information.</li> <li>2.7 Use arithmetic processes to find solutions of simple mathematical problems.</li> </ul>
3. Underpinning skills	<ul> <li>3.1 Identifying calculation requirements from workplace information.</li> <li>3.2 Selecting appropriate mathematical methods.</li> <li>3.3 Using appropriate mathematical methods.</li> <li>3.4 Using mathematical language, symbols and terminology</li> </ul>

	<ul> <li>3.5 Applying appropriate units of measurement for volume, weight, density, percentage etc.</li> <li>3.6 Ability to include workplace information (project documents, graphs, charts, tables, spread sheets, item price quotations, equipment manuals).</li> <li>3.7 Identifying calculation requirements form workplace information.</li> <li>3.8 Using arithmetic processes to find solutions of simple mathematical problems.</li> </ul>
4. Required attitudes	<ul> <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> </ul>
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 5.3 materials consumable 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 6.4 portfolio.
7. Context of assessment	<ul> <li>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</li> <li>7.2 Assessment should be done by a BTEB certified assessor.</li> </ul>

#### **Accreditation Requirements**

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.

# National Technical and Vocational Qualifications Framework for Bangladesh Unit of Competency

Unit Title	Apply Occupational Safety and Health (OSH) Practices at Workplace	
Unit Code	GN1002A1	
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to apply occupational safety and health (OSH) practices at workplace. It includes identifying, controlling and reporting OSH hazards, conducting work safely, following emergency response procedures and maintaining and improving health and safety in the workplace.	
Nominal Hours	30 Hours	
Elements of Competency	Performance Criteria  Bold & italicized terms are elaborated in the Range of Variables	
1. Identify, control and report OSH hazards	<ul> <li>1.1 Immediate work area is routinely checked for Occupational Safety and Health (OSH) hazards prior to commencing and during work.</li> <li>1.2 <i>Hazards</i> and unacceptable performance are identified and corrective action is taken within the level of responsibility.</li> <li>1.3 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures.</li> <li>1.4 Safety signs and symbols are identified and followed.</li> </ul>	
2. Conduct work safely	<ul><li>2.1 OSH practices are applied in the workplace.</li><li>2.2 Personal Protective Equipment (PPE) is used.</li></ul>	
3. Follow emergency response procedures	<ul> <li>3.1 Emergency situations are identified and reported according to workplace requirements.</li> <li>3.2 Emergency procedures are followed as appropriate to the nature of the emergency and according to workplace procedures.</li> <li>3.3 Workplace procedures for dealing with accidents, fires and emergencies are followed whenever necessary within scope of responsibilities.</li> </ul>	

	Bangladesh Technical Education Board (BTE
4. Maintain and improve health and safety in the workplace	<ul> <li>4.1 Risks are identified and appropriate control measures are implemented in the workplace.</li> <li>4.2 Recommendations arising from risk assessments are implemented within level of responsibility.</li> <li>4.3 Opportunities for improving OSH performance are identified and raised with relevant personnel.</li> <li>4.4 Safety records are maintained according to <i>company policies</i>.</li> </ul>
Range of Variables	
Variables	Range (may include but not limited to):
1. Hazards	<ul> <li>1.1 OSH incidents include near misses, injuries, illnesses and property damage, noise, handling hazardous substances, other hazards.</li> <li>1.2 Working with and near moving equipment / load shifting equipment.</li> <li>1.3 Broken or damaged equipment or materials.</li> </ul>
2. Personal Protective Equipment (PPE)	2.1 Apron 2.2 Safety helmet 2.3 Goggles 2.4 Ear muffs 2.5 Ear plugs 2.6 Gloves 2.7 Clothing 2.8 Safety boots
3. Workplace procedures	<ul> <li>3.1 OSH system and related documentation including policies and procedures.</li> <li>3.2 Standard Operating Procedures (SOPs).</li> <li>3.3 Information on hazards and work process, hazard alerts, safety signs and symbols.</li> <li>3.4 Labels.</li> <li>3.5 Material Safety Data Sheets (MSDSs) and manufacturers' advice.</li> </ul>
4. Company policies	<ul> <li>4.1 Job related Standard Operating Procedures (SOPs).</li> <li>4.2 Occupational Safety and Health (OSH) specific procedures.</li> <li>Examples of OSH procedures include – consultation and participation, emergency response to specific hazards, incident investigation, risk assessment, reporting arrangement and issue resolution procedures.</li> </ul>

#### **Evidence Guide**

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

Critical aspects of competency	Assessment required evidences that the candidate:  1.1 used Personal Protective Equipment (PPE)  1.2 identified hazards  1.3 took corrective action of different hazards  1.4 took corrective action for emergency procedure  1.5 reported emergency situation to the supervisor / manger  1.6 satisfied requirements mentioned in the performance criteria and range of variables.
2. Underpinning knowledge	<ul> <li>2.1 OSH workplace policies and procedures.</li> <li>2.2 Work safety procedures.</li> <li>2.3 Fire and emergency procedures.</li> <li>2.4 Types of hazards (Biological, Chemical and Physical) and their effects.</li> <li>2.5 PPE types and uses.</li> <li>2.6 Personal hygiene practices.</li> <li>2.7 OSH awareness.</li> <li>2.8 Steps of hazard identification.</li> <li>2.9 Principles of hazards control.</li> <li>2.10 Employer's role.</li> <li>2.11 Supervisor's responsibilities.</li> </ul>
3. Underpinning skills	<ul> <li>3.1 Identifying OSH policies and procedures.</li> <li>3.2 Following personal work safety practices.</li> <li>3.3 Reporting hazards and risks.</li> <li>3.4 Responding to emergency procedures.</li> <li>3.5 Maintaining physical well-being in the workplace.</li> <li>3.6 Identify tools and equipment related to OSH.</li> <li>3.7 Improving OSH performance.</li> </ul>
4. Required attitudes	<ul> <li>4.1 Commitment to occupational safety and health.</li> <li>4.2 Sincere and honest to duties.</li> <li>4.3 Promptness in carrying out activities.</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 of peers and seniors at workplace.</li> <li>4.8 Communicate with peers and seniors at workplace.</li> </ul>
5. Resource implications	The following resources must be provided: 5.1 workplace (actual or simulated) 5.2 tools and equipment appropriate to workplace 5.3 materials relevant to the proposed activity 5.4 all tools, equipment, material and documentation required 5.5 relevant specifications or work instructions.

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	<ul> <li>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</li> <li>7.2 Assessment should be done by a BTEB certified assessor.</li> </ul>

#### **Accreditation Requirements**

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.

# National Technical and Vocational Qualifications Framework for Bangladesh Unit of Competency

Unit Title	Use	English in the Workplace
Unit Code	GN2	003A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to use English in the workplace. It includes reading and understanding workplace documents in English; writing simple routine workplace documents in English; listening to conversation in English; and performing conversation in English.	
Nominal Hours	70 H	ours
Elements of Competency	Performance Criteria  Bold & italicized terms are elaborated in the Range of Variables	
Read and understand     workplace     documents in English		<ul><li>1.1 Workplace documents are read and understood.</li><li>1.2 Visual information is interpreted.</li></ul>
Write simple routine     workplace     documents in English		<ul><li>2.1 Simple routine workplace documents are prepared using key words, phrases, simple sentences and visual aids where appropriate.</li><li>2.2 Key information is written in the appropriate places in standard forms.</li></ul>
3. Listen to conversation in English		3.1 Active listening in English language is demonstrated to required workplace standard.
Perform conversation in English		4.1 Conversation is performed in English with peers, customers and management to required workplace standard.
Range of Variables		
Variable		Range (may include but not limited to):
1. Workplace documents		<ul><li>1.1 Schedules and itineraries</li><li>1.2 Agenda</li><li>1.3 Simple reports such as progress and incident reports</li></ul>

	1.4 Job sheets
	1.5 Operational manuals
	1.6 Brochures and promotional material
	1.7 Visual and graphic materials
	1.8 Standards
	1.9 OSH information
	2.1 Signs
	2.2 Maps
	2.3 Diagrams
2. Visual information	2.4 Forms
	2.5 Labels
	2.6 Graphs
	2.7 Charts

#### **Evidence Guide**

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

Critical aspects     of competency	Assessment required evidences that the candidate: 1.1 used basic English in the workplace 1.2 read and understood workplace documents in English 1.3 constructed simple routine workplace documents in English 1.4 listened to conversation in English 1.5 communicated with peers, customers and management using English to the required workplace standard.
2. Underpinning knowledge	<ul> <li>2.1 Read workplace documents in English.</li> <li>2.2 Write simple routine workplace documents in English.</li> <li>2.3 Listen to conversation in English.</li> <li>2.4 Perform conversation in English.</li> <li>2.5 Interaction skills (i.e., teamwork, interpersonal skills, etc.).</li> <li>2.6 Job roles, responsibilities and compliances.</li> </ul>
3. Underpinning skills	<ul> <li>3.1 Reading and understanding workplace documents in English.</li> <li>3.2 Using appropriate vocabulary and grammar, and standard spelling and punctuation.</li> <li>3.3 Writing simple routine workplace documents in English, such as: schedules and agendas, job sheets, operational manuals and brochures, and promotional material.</li> <li>3.4 Demonstrating listen English language to required workplace standard.</li> </ul>

9	
	<ul> <li>3.5 Performing conversation in English with peers, customers and management.</li> <li>3.6 Working effectively with others.</li> <li>3.7 Listening and questioning skills.</li> <li>3.8 Following simple directions.</li> </ul>
4. Required attitudes	<ul> <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> </ul>
5. Resources implication	The following resources must be provided: 5.1 workplace (actual or simulated) 5.2 tools, equipment and physical facilities appropriate to perform activities 5.3 materials, consumables needed to perform activities.
6. Methods of assessment	Methods of assessment may include but not limited to: 6.1 written test 6.2 demonstration with 6.3 oral questioning 6.4 portfolio.
7. Context of assessment	<ul> <li>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completing of the training module.</li> <li>7.2 Assessment should be done by a BTEB certified assessor.</li> </ul>

#### **Accreditation Requirements**

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.

#### National Technical and Vocational Qualifications Framework for Bangladesh Unit of Competency

Unit Title	Operate in a Self-directed Team
Unit Code	GN2004A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to operate in a self-directed team. It includes identifying team goals and processes, communicating and cooperating with team members, working as a team member and solving problem as a team member.
Nominal Hours	20 Hours
Elements of Competency	Performance Criteria  Bold & italicized words are detailed in the Range of Variables
Identify team     goals and     processes	<ul> <li>1.1 Team goals and processes are identified.</li> <li>1.2 <i>Roles and responsibilities</i> of team members are identified.</li> <li>1.3 Relationships within team and with other work areas identified.</li> </ul>
2. Communicate and cooperate with team members	<ul> <li>2.1 Effective <i>interpersonal skills</i> are used to interact with team members and to contribute to activities and objectives.</li> <li>2.2 Formal and informal <i>forms of communication</i> are used effectively to support team achievement.</li> <li>2.3 Diversity is respected and valued in team functioning.</li> <li>2.4 Views and opinions of other team members are understood and reflected accurately.</li> <li>2.5 <i>Workplace terminology</i> is used correctly to assist communication.</li> </ul>
3. Work as a team member	<ul> <li>3.1 Duties, responsibilities, authorities, objectives and task requirements are identified and clarified with team.</li> <li>3.2 Tasks are performed in accordance with organizational and team requirements, specifications and workplace procedures.</li> <li>3.3 Team members support other members as required to ensure team achieves goals and requirements.</li> <li>3.4 Agreed reporting lines are followed using standard operating procedure.</li> </ul>

# 4. Solve problems as a team member

- 4.1 Current and potential problems faced by team are identified.
- 4.2 Procedures for avoiding and managing problems are identified.
- 4.3 **Problems solving activities** are applied effectively and, in a manner, which supports the team.

#### Range of Variables

Variable	Range (may include but not limited to):
Roles and responsibilities	<ul> <li>1.1 Contributing to overall project objectives</li> <li>1.2 Completing individual deliverables</li> <li>1.3 Providing expertise</li> <li>1.4 Working with users to establish and meet business needs</li> <li>1.5 Documenting the process</li> </ul>
2. Interpersonal skills	<ul> <li>2.1 Verbal communication</li> <li>2.2 Non-verbal communication</li> <li>2.3 Listening skills</li> <li>2.4 Negotiation</li> <li>2.5 Problem-solving</li> <li>2.6 Decision-making</li> <li>2.7 Assertiveness</li> </ul>
3. Forms of communication	<ul><li>3.1 Verbal communication</li><li>3.2 Written communication</li><li>3.3 Nonverbal communication</li></ul>
4. Workplace terminology	4.1 Career 4.2 Field 4.3 Occupation 4.4 Job 4.5 Position 4.6 Profession 4.7 Industry 4.8 Career field 4.9 Business 4.10 Trade 4.11 Employer 4.12 Organization 4.13 Enterprise 4.14 Firm 4.15 Administrator 4.16 Manager 4.17 ACR

	5.1 Identifying the problem
5. Problems	5.2 Consider solutions
solving activities	5.3 Action
	5.4 Follow-up

#### **Evidence Guide**

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

The state of the s	
Critical aspects     of competency	Assessment required evidences that the candidate:  1.1 worked effectively within a team  1.2 dealt with a range of communication / information at one time  1.3 made constructive contributions in workplace issues  1.4 sought workplace issues effectively  1.5 responded to workplace issues promptly  1.6 presented information clearly and effectively in written form  1.7 used appropriate sources of information  1.8 asked appropriate questions  1.9 provided accurate information.
2. Underpinning knowledge	2.1 Organizational requirements for written and electronic communication methods.      2.2 Effective verbal communication methods.
3. Underpinning skills	<ul> <li>3.1 Organizing information.</li> <li>3.2 Understanding and conveying intended meaning.</li> <li>3.3 Participating in variety of workplace discussions.</li> <li>3.4 Complying with organization requirements for the use of written and electronic communication methods.</li> </ul>
4. Required attitudes	<ul> <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 concern.</li> <li>4.7 Respect to peers and seniors at workplace.</li> <li>4.8 Communicate with peers and seniors at workplace.</li> </ul>

5. Resource implications	The following resources must be provided: 5.1 workplace (actual or simulated) 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	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	<ul> <li>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completing of module.</li> <li>7.2 Assessment should be done by a BTEB certified assessor.</li> </ul>

#### **Accreditation Requirements**

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.

#### National Technical and Vocational Qualifications Framework for Bangladesh Unit of Competency

Unit Title	Present and Apply Workplace Information
Unit Code	GN2005A1
Nominal Hours	This unit covers the knowledge, skills and attitudes required to present and apply workplace information. It includes identifying information requirements, processing data, analyzing, interpreting and organizing information and applying and presenting workplace information.
Unit Descriptor	30 Hours
Elements of Competency	Performance Criteria  Bold & italicized terms are elaborated in the Range of Variables
Identify information requirements	<ul><li>1.1 Sources of information requirements in the workplace are identified.</li><li>1.2 Sources of Information requirements in the workplace are interpreted.</li></ul>
2. Process Data	<ul> <li>2.1 Data is collected and correlated as per prescribed <i>method</i>.</li> <li>2.2 Relevant data is used as references in accordance with the objectives of the program.</li> <li>2.3 Information is applied according to workplace requirements.</li> </ul>
3. Analyze, interpret and organize information	<ul><li>3.1 Collected information is analyzed, interpret and organize as required for workplace.</li><li>3.2 Collected information is interpreted and organized as required for workplace.</li></ul>
4. Apply and present workplace information	<ul> <li>4.1 Findings and recommendations are summarized and presented in a user-friendly manner.</li> <li>4.2 Draft report / <i>forms</i> are prepared based on standard format.</li> <li>4.3 Graphs and other visual presentations are prepared to highlight <i>analysis</i> / interpretation of information.</li> <li>4.4 Reports / forms are submitted and distributed to relevant departments / persons.</li> </ul>

Range of Variables	
Variables	Range (may include but not limited to):
1. Sources of information	<ul> <li>1.1 Daily job instructions</li> <li>1.2 Specifications</li> <li>1.3 Standard operating procedures</li> <li>1.4 Charts</li> <li>1.5 Lists</li> <li>1.6 Documents</li> <li>1.7 Computer data</li> <li>1.8 Drawings</li> <li>1.9 Sketches</li> <li>1.10 Tables</li> <li>1.11 Technical manuals and / or charts</li> <li>1.12 Surveys</li> <li>1.13 Interviews</li> <li>1.14 Front-end analysis</li> <li>1.15 Functional analysis</li> </ul>
2. Methodologies	2.1 Qualitative 2.2 Quantitative
3. Forms	<ul><li>3.1 Questionnaires</li><li>3.2 Profile</li><li>3.3 Accident / incident report form</li><li>3.4 Work order</li><li>3.5 Purchase order</li></ul>
4. Analysis	<ul><li>4.1 Average (mean, median, mode)</li><li>4.2 Percentage</li><li>4.3 Frequency distribution</li></ul>

#### **Evidence Guide**

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

Critical aspects of competency	Assessment required evidence that the candidate:  1.1 communicated and delivered current information in an interactive work environment as per workplace standard.
2. Underpinning knowledge	<ul><li>2.1 Identify information.</li><li>2.2 Identify data.</li><li>2.3 Workplace standard.</li></ul>
3. Underpinning skills	<ul><li>3.1 Collecting information.</li><li>3.2 Collecting data.</li><li>3.3 Demonstrating, interpreting and / or following data sheet or instruction.</li></ul>

The state of the s	
	<ul><li>3.4 Performing task as per data sheet or instruction.</li><li>3.5 Keeping records and reports.</li></ul>
4. Required attitudes	<ul> <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 Communicate with peers and seniors at workplace.</li> </ul>
5. Resource implications	The following resources must be provided: 5.1 workplace (actual or simulated) 5.2 tools, equipment and physical facilities appropriate to perform activities 5.3 materials consumable needed 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 6.4 portfolio.
7. Context of assessment	<ul> <li>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</li> <li>7.2 Assessment should be done by a BTEB certified assessor.</li> </ul>

#### **Accreditation Requirements**

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.

# National Technical and Vocational Qualifications Framework for Bangladesh Unit of Competency

Unit Title	Demonstrate Work Values
Unit Code	GN3006A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to demonstrate work values. It includes defining the purpose of work, applying work values / ethics, dealing with ethical problems and maintaining integrity of conduct in the workplace.
Nominal Hours	20 Hours
Elements of Competency	Performance Criteria  Bold & italicized terms are elaborated in the range of variables
Define the purpose of work	<ul><li>1.1 One's unique sense of purpose for working and the why's of work are identified, reflected on and clearly defined for one's development as a person and as a member of society.</li><li>1.2 Personal mission is in harmony with company's values are defined.</li></ul>
2. Apply work values / ethics	<ul> <li>2.1 Work values / ethics / concepts are classified and reaffirmed in accordance with the transparent company ethical standards, policies and guidelines.</li> <li>2.2 Work practices are undertaken in compliance with industry work ethical standards, organizational policy and guidelines.</li> <li>2.3 Personal behavior and relationships with co-workers are maintained as per standards, policy and guidelines.</li> <li>2.4 Company resources are used in accordance with transparent company ethical standard, policies and guidelines.</li> </ul>
3. Deal with ethical problems	<ul> <li>3.1 Company ethical standard, organizational policy and guidelines on the prevention and reporting of unethical conduct are accessed and applied in accordance with transparent company ethical standard, policies and guidelines.</li> <li>3.2 Work <i>incidents</i> / <i>situations</i> are reported and/or resolved in accordance with company protocol /</li> </ul>

	guidelines.  3.3 Resolution and / or referral of ethical problems identified are used as learning opportunities.
4. Maintain integrity of conduct in the workplace	<ul> <li>4.1 Personal work practices and values are demonstrated consistently with acceptable ethical conduct and company's core values.</li> <li>4.2 <i>Instructions</i> to co-workers are provided based on ethical, lawful and reasonable directives.</li> <li>4.3 Company values / practices are shares with co-workers using appropriate behavior and language.</li> </ul>
Range of Variables	
Variable	Range (may include but not limited to):
1. Work values / ethics / concepts	1.1 Commitment / Dedication 1.2 Sense of urgency 1.3 Sense of purpose 1.4 Love for work 1.5 High motivation 1.6 Orderliness 1.7 Reliability 1.8 Competence 1.9 Dependability 1.10 Goal-oriented 1.11 Sense of responsibility 1.12 Being knowledgeable 1.13 Loyalty to work / company 1.14 Sensitivity to others 1.15 Compassion / Caring attitude 1.16 Balancing between family and work 1.17 Benjamin spirit / teamwork 1.18 Sense of nationalism 1.19 Gender awareness
2. Work practices	2.1 Quality of work 2.2 Punctuality 2.3 Efficiency 2.4 Effectiveness 2.5 Productivity 2.6 Resourcefulness 2.7 Innovativeness / Creativity 2.8 Cost consciousness 2.9 5S 2.10 Attention to details

3. Company resources	<ul><li>3.1 Consumable materials</li><li>3.2 Equipment / Machineries</li><li>3.3 Human</li><li>3.4 Time</li><li>3.5 Financial resources</li></ul>			
4. Incidents / situations	<ul> <li>4.1 Violent / intense dispute or argument</li> <li>4.2 Gambling</li> <li>4.3 Use of prohibited substances</li> <li>4.4 Pilferages</li> <li>4.5 Damage to person or property</li> <li>4.6 Vandalism</li> <li>4.7 Falsification</li> <li>4.8 Bribery</li> <li>4.9 Sexual Harassment</li> <li>4.10 Blackmail</li> </ul>			
5. Instructions	5.1 Verbal 5.2 Written			
Evidence n	Evidence Guide Evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of Unit of Competency.			
1. Critical aspects of competency	Assessment required evidences that the candidate:  1.1 defined one's unique sense of purpose for working  1.2 clarified and affirmed work values / ethics / concepts consistently in the workplace  1.3 demonstrated work practices satisfactorily and consistently in compliance with industry work ethical standards, organizational policy and guidelines  1.4 demonstrated personal behavior and relationships with co-workers and / or clients consistent with ethical standards policy and guidelines  1.5 used company resources in accordance with company ethical standard, policies and guidelines  1.6 followed company ethical standards, organizational policy and guidelines on the prevention and reporting of unethical conduct / behavior  1.7 demonstrated sufficient knowledge of the factors influencing negotiation to achieve agreed outcome  1.8 participated in negotiation with at least one person to achieve an agreed outcome.			

<u></u>		
2. Underpinning knowledge	<ul> <li>2.1 Occupational safety and health.</li> <li>2.2 Work values and ethics.</li> <li>2.3 Company performance and ethical standards.</li> <li>2.4 Company policies and guidelines.</li> <li>2.5 Fundamental rights at work including gender sensitivity.</li> <li>2.6 Work responsibilities / job functions.</li> <li>2.7 Corporate social responsibilities.</li> <li>2.8 Company code of conduct / values.</li> <li>2.9 Balancing work and family responsibilities.</li> <li>2.10 Codes of practice and guidelines for the organization.</li> <li>2.11 Organization policy and procedures for negotiations.</li> <li>2.12 Decision making and conflict resolution strategies procedures.</li> <li>2.13 Problem solving strategies on how to deal with unexpected questions and attitudes during negotiation.</li> </ul>	
3. Underpinning skills	<ul> <li>3.1 Developing interpersonal skills to strengthen rapport wit other parties.</li> <li>3.2 Communicating with others (verbal and listening).</li> <li>3.3 Self-awareness, understanding and acceptance.</li> <li>3.4 Applying good manners and right conduct.</li> <li>3.5 Observation skills.</li> <li>3.6 Negotiation skills.</li> </ul>	
4. Required attitudes	<ul> <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 to rights for peers and seniors at workplace.</li> <li>4.8 Communication with peers and seniors at workplace.</li> </ul>	
5. Resources implication	The following resources must be provided: 5.1 workplace (actual or simulated) 5.2 case studies / scenarios 5.3 room with facilities necessary for the negotiation process 5.4 human resources (negotiators).	
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 centre or in an actual or simulated workplace after completion of the training module.
- 7.2 Assessment should be done by a BTEB certified Assessor.

#### **Accreditation Requirements**

Unit Title	Perform Computer Operations	
Unit Code	GN3008A1	
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to perform computer operations. It includes preparing for task, preparing a word document, a spreadsheet document, a power point presentation and accessing information using internet service.	
Nominal Hours	60 Hours	
Elements of Competency	Performance Criteria  Bold & italicized terms are elaborated in the Range of Variables	
1. Prepare for task	<ul> <li>1.1 <i>Tasks</i> are selected as per workplace requirements.</li> <li>1.2 <i>Hardware</i> and <i>software</i> are selected according to task assigned and required outcome.</li> <li>1.3 <i>Occupational Health and Safety (OSH) guidelines</i> and procedures are followed as per workplace requirements.</li> </ul>	
2. Prepare a Word Document	<ul> <li>2.1 Data are entered into computer in accordance with requirements.</li> <li>2.2 Information is checked and saved in accordance with standard operating procedures.</li> <li>2.3 Data are stored in <i>storage media</i> according to requirements.</li> <li>2.4 Documents are printed as per requirements.</li> <li>2.5 Work is performed within <i>ergonomic guidelines</i>.</li> </ul>	
3. Prepare a Spreadsheet document	<ul> <li>3.1 Spreadsheet data are entered into computer in accordance with requirements.</li> <li>3.2 Information is checked and saved in accordance with standard operating procedures.</li> <li>3.3 Data are stored in storage media according to requirements.</li> <li>3.4 Documents are printed as per requirements.</li> <li>3.5 Work is performed within ergonomic guidelines.</li> </ul>	

·		
4. Prepare a power point presentation	<ul> <li>4.1 Data are entered using power point.</li> <li>4.2 Entered data are checked and saved.</li> <li>4.3 Power point is used in accordance with workplace requirements.</li> <li>4.4 Power point documents are printed as per requirements.</li> </ul>	
5. Access information using internet service	<ul> <li>5.1 Application containing information required is accessed according to workplace procedures.</li> <li>5.2 Data are accessed and downloaded using the internet service.</li> <li>5.3 Data are stored in storage media according to requirements.</li> <li>5.4 Data are printed as per workplace requirements.</li> <li>5.5 Communications through email are performed.</li> </ul>	
Range of Variables		
Variable	Range (may include but not limited to):	
1. Task	<ul> <li>1.1 Word processing (type, save and print document including simple tables)</li> <li>1.2 Spread sheets (payroll, requisition and inventory)</li> <li>1.3 Internet access</li> <li>1.4 Power Point Presentation (Word, inserting symbols)</li> </ul>	
2. Hardware	2.1 Personal computers 2.2 Networked systems 2.3 Communication equipment 2.4 Printers 2.5 Scanners 2.6 Keyboard 2.7 Mouse	
3. Software	3.1 Word processing packages 3.2 Data base packages 3.3 Internet 3.4 Spreadsheets	
4. OSH guidelines	4.1 OSH guidelines 4.2 Workplace procedures	
5. Storage media	5.1 CDs 5.2 Zip disks 5.3 Hard disk drives, local and remote	

	Bangiacesh Technical Education Board (Bi
6. Ergonomic guidelines	<ul><li>6.1 Types of equipment used</li><li>6.2 Appropriate furniture</li><li>6.3 Sitting posture</li><li>6.4 Lifting posture</li><li>6.5 Visual display unit screen brightness</li></ul>
Evidence	1
Evidence n	nust be authentic, valid, sufficient, reliable, consistent, meet all requirements of current version of Unit of
Critical aspects     of competency	Assessment required evidences that the candidate:  1.1 selected and used hardware components according to the task requirement  1.2 identified and explained the functions of both hardware and software used, their general features and capabilities  1.3 produced accurate and complete data in accordance with the requirements  1.4 used appropriate devices and procedures to transfer files / data accurately.
2. Underpinning knowledge	<ul> <li>2.1 Basic ergonomics of keyboard and computer use.</li> <li>2.2 Main types of computers and basic features of different operating systems.</li> <li>2.3 Main parts of a computer.</li> <li>2.4 Software and hardware.</li> <li>2.5 OSH principles and responsibilities.</li> <li>2.6 Computer peripherals.</li> </ul>
3. Underpinning skills	<ul> <li>3.1 Reading skills required to interpret work instruction.</li> <li>3.2 Preparing a Spreadsheet document.</li> <li>3.3 Preparing a power point presentation.</li> <li>3.4 Using the internet download information.</li> <li>3.5 Communicating through e-mail.</li> </ul>
4. Required attitudes	<ul> <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> </ul>

5. Resource implication	The following resources must be provided: 5.1 workplace (actual or simulated) 5.2 computer hardware, facilities and relevant accessories of the computer 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 6.4 portfolio.
7. Context of assessment	<ul> <li>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</li> <li>7.2 Assessment should be done by a BTEB certified assessor.</li> </ul>

Unit Title	Lead Small Team		
Unit Code	GN3010A1		
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to lead small team. It includes providing team leadership, assigning responsibilities, setting performance expectations for team members and supervising team performance.		
Nominal Hours	20 Hours		
Elements of Competency	Performance Criteria  Bold & italicized terms are elaborated in the Range of Variables		
Provide team     leadership	<ul> <li>1.1 Work requirements are identified and presented to team members.</li> <li>1.2 Reasons for instructions and requirements are communicated to team members.</li> <li>1.3 Team members' queries and concerns are recognized, discussed and dealt with team members.</li> </ul>		
Assign     responsibilities	<ul> <li>2.1 Duties, and responsibilities are allocated having regard to the skills, knowledge and attitudes required to properly undertake the assigned task.</li> <li>2.2 Duties are allocated having regard to individual preference, domestic and personal considerations, whenever possible.</li> </ul>		
Set performance expectations for team members	<ul> <li>3.1 Performance expectations are established based on client needs and according to assignment requirements.</li> <li>3.2 Performance expectations are based on individual team members' duties and area of responsibility.</li> <li>3.3 Performance expectations are discussed and directed to implement in the workplace.</li> </ul>		
Supervise team performance	<ul> <li>4.1 Monitoring of performance are taken place against defined performance criteria and / or assignment instructions and corrective action taken if required.</li> <li>4.2 Team members are provided feedback, positive support and advice on strategies to overcome any deficiencies.</li> <li>4.3 Performance issues which cannot be rectified or</li> </ul>		

addressed within the team are referenced to appropriate
personnel.
4.4 Team members are kept informed of any changes in the
priority allocated to assignments or tasks which might
impact on clients' / customers' needs and satisfaction.
4.5 Team operations are monitored to ensure that employer
/ client needs and requirements are met.
4.6 Follow-up communication is provided on all issues
affecting the team.
4.7 All relevant documentation is completed.

### Range of Variables

Variable	Range (may include but are not limited to):
Work requirements	1.1 Client Profile     1.2 Assignment instructions
Team member's queries and concerns	2.1 Roster 2.2 Shift details
Monitoring of performance	3.1 Formal process 3.2 Informal process
4. Feedback	4.1 Formal process 4.2 Informal process 4.3 Sandwich process
5. Performance issues	<ul> <li>5.1 Work output</li> <li>5.2 Work quality</li> <li>5.3 Team participation</li> <li>5.4 Compliance with workplace protocols</li> <li>5.5 Safety</li> <li>5.6 Customer service</li> </ul>

#### **Evidence Guide**

	Assessment required evidences that the candidate:
	1.1 maintained or improved individuals and / or team
	performance given a variety of possible scenario
	1.2 assessed and monitored team and individual
1. Critical aspects of	performance against set criteria
competency	1.3 represented concerns of a team and individual to next
	level of management or appropriate specialist and to
	negotiate on their behalf
	1.4 allocated duties and responsibilities, having regard to
	individual's knowledge, skills and aptitude and the needs

Dangiadesh rechinical Education Board (BTE			
	of the tasks to be performed  1.5 set and communicated performance expectations for a range of tasks and duties within the team and provided feedback to team members.		
2. Underpinning knowledge	<ul> <li>2.1 Company policies and procedures.</li> <li>2.2 Relevant legal requirements.</li> <li>2.3 How performance expectations are set.</li> <li>2.4 Methods of monitoring performance.</li> <li>2.5 Client expectations.</li> <li>2.6 Team members' duties and responsibilities.</li> </ul>		
3. Underpinning skills	<ul><li>3.1 Counselling informal performance skills.</li><li>3.2 Building team skills.</li><li>3.3 Negotiating skills.</li></ul>		
4. Required attitudes	<ul> <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 Communicate with peers and seniors at workplace.</li> <li>4.8 Respect to rights of peers and seniors at workplace.</li> </ul>		
5. Resource implications	The following resources must be provided: 5.1 workplace (actual or simulated) 5.2 tools, equipment and facilities appropriate to processes or activity 5.3 materials relevant to the proposed activity 5.4 equipment and outfits appropriate in applying safety measures 5.5 relevant drawings, manuals, codes, standards and reference material.		
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 centre or in an actual or simulated workplace after completion of the training module.
- 7.2 Assessment should be done by a BTEB certified assessor.

#### **Accreditation Requirements**

The Sector Specific Competencie	s	

Bangladesh Technical Education Board (BTEB)

Unit Title	Work in the Ceramic Industry
Unit Code	CERSS1001A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to work in the ceramic industry. It includes identifying job roles and responsibilities and observing OSH, planning work activities and working with others.
Nominal Hours	20 Hours
Elements of Competency	Performance Criteria  Bold & italicized terms are elaborated in the Range of Variables
Identify job roles     and responsibilities	<ul><li>1.1 Job roles and responsibilities are identified.</li><li>1.2 Relationships within the ceramic industry employees are identified.</li></ul>
2. Identify and observe OSH	<ul> <li>2.1 Occupational Safety and Health (OSH) is identified and observed.</li> <li>2.2 Safe work practices are followed when using equipment in the work environment.</li> <li>2.3 Hazards related to workplace are identified.</li> </ul>
3. Plan work activities	<ul><li>3.1 Common goals, objectives and tasks are identified and clarified with appropriate persons.</li><li>3.2 Individual tasks are determined and agreed on in accordance with workplace environment.</li></ul>
4. Work with others	<ul> <li>4.1 Effective interpersonal skills are applied to interact with others and to contribute to activities and objectives.</li> <li>4.2 Assigned tasks are performed in accordance with job requirements, specifications and workplace environment.</li> <li>4.3 Work requirements are confirmed with colleagues.</li> </ul>
Range of Variables	
Variable	Range (may include but not limited to):

1. Occupational Safety and Health (OSH)	1.1 Apron 1.2 Hair net / Cap 1.3 Hand gloves 1.4 Goggles 1.5 Safety shoes 1.6 Mask 1.7 Ear-protector
2. Hazards	<ul> <li>2.1 Mechanical hazards</li> <li>2.2 Electrical hazards</li> <li>2.3 Fire hazard</li> <li>2.4 Chemical hazard</li> <li>2.5 Sound hazard</li> <li>2.6 Environmental hazard and other workplace hazards</li> </ul>
3. Effective interpersonal skills	<ul> <li>3.1 Basic listening and speaking skills</li> <li>3.2 Use of terminology and jargon</li> <li>3.3 Communicating and receiving feedback</li> <li>3.4 Interpretation of instructions, and</li> <li>3.5 Basic principles of effective communication</li> </ul>

Critical aspects of competency	Assessment required evidences that the candidate:  1.1 identified job roles and responsibilities  1.2 demonstrated working in the ceramic industry
2. Underpinning knowledge	<ul><li>2.1 Safety rules and procedure.</li><li>2.2 Safety requirements in handling tools.</li><li>2.3 Working with others.</li></ul>
3. Underpinning skills	<ul><li>3.1 Reading skills required to interpret work instruction and numerical skills.</li><li>3.2 Communicating skills.</li><li>3.3 Problem solving in emergency situation.</li></ul>
4. Required attitudes	<ul> <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 Environmental concerns.</li> <li>4.5 Eagerness to learn.</li> <li>4.6 Tidiness and timeliness.</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> </ul>

	The following resources must be provided:
5. Resource implication	<ul> <li>5.1 workplace (actual or simulated)</li> <li>5.2 tools, equipment and physical facilities appropriate to perform activities;</li> <li>5.3 materials and consumables needed to perform activities.</li> </ul>
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	<ul> <li>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</li> <li>7.2 Assessment should be done by a BTEB certified assessor.</li> </ul>

Unit Title	Use Measuring Tools and Equipment
Unit Code	CERSS1002A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to use measuring tools and equipment. It includes selecting measuring instruments, carrying out measurements and calculation and maintaining measuring instruments.
Nominal Hours	20 Hours
Elements of Competency	Performance Criteria  Bold & Italicized terms are elaborated in the Range of Variables
Select measuring instruments	<ul> <li>1.1 Object or component to be measured is identified.</li> <li>1.2 Correct specifications are obtained from relevant source.</li> <li>1.3 Required <i>measuring instrument</i> is selected in accordance with job requirements.</li> </ul>
2. Carry out measurements and calculation	<ul> <li>2.1 Accurate measurements are obtained in accordance with job requirement.</li> <li>2.2 Basic calculation is needed to complete for performed work tasks.</li> <li>2.3 Calculations involving fractions, percentages and mixed numbers are used to complete workplace tasks.</li> <li>2.4 Numerical calculation is checked and corrected for accuracy in accordance with job requirement.</li> <li>2.5 Instruments are read according to the limit of accuracy of the tool.</li> </ul>
3. Maintain measuring instruments	<ul><li>3.1 Measuring instruments are checked for damage prior to storage.</li><li>3.2 Measuring instruments are cleaned before and after using.</li></ul>
Range of Variables	
Variable	Range (may include but not limited to):

1. Measuring instruments	1.1 Measuring tape 1.2 Calipers (inside-outside) 1.3 Thickness gauge 1.4 Torque gauge 1.5 Small hole gauge 1.6 Try square 1.7 Protractor 1.8 Combination gauge 1.9 Steel rule
2. Basic calculation	2.1 Volume 2.2 Area 2.3 Displacement 2.4 Inside diameter 2.5 Circumference 2.6 Radius 2.7 Length 2.8 Thickness 2.9 Outside diameter 2.10 Taper 2.11 Out of roundness

Critical aspects of competency	Assessment required evidences that the candidate: 1.1 selected measuring instruments 1.2 carried-out measurements and calculations 1.3 maintained measuring instruments.
2. Underpinning knowledge	<ul><li>2.1 Types of measurments.</li><li>2.2 Types of measuring instruments and its use.</li><li>2.3 Formula for volume, area, perimeter and other geometric figures.</li></ul>
3. Underpinning skills	<ul> <li>3.1 Caring and handling measuring instruments.</li> <li>3.2 Calibrating and using measuring instruments.</li> <li>3.3 Performing calculation by addition, subtraction, multiplication and division.</li> <li>3.4 Visualizing objects and shapes.</li> <li>3.5 Interpreting formula for volume, area, perimeter and other geometric figures.</li> </ul>
4. Required attitudes	<ul><li>4.1 Commitment to occupational safety and health.</li><li>4.2 Promptness in carrying out activities.</li></ul>

	<ul> <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> </ul>
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 5.3 materials and consumables needed 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 6.4 portfolio.
7. Context of assessment	<ul> <li>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</li> <li>7.2 Assessment should be done by a BTEB certified assessor.</li> </ul>

Unit Title	Handle Dangerous Goods / Hazardous Substances
Unit Code	CERSS2003A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to handle dangerous goods / hazardous substances. It includes identifying requirements for working with dangerous good and / or hazardous substances, confirming site incident procedures and selecting handling techniques.
Nominal Hours	20 Hours
Elements of Competency	Performance Criteria  Bold & Italicized terms are elaborated in the Range of Variables
1. Identify requirements for working with dangerous goods and / or hazardous substances	and / or dangerous goods are identified and applied.  1.4 Legislative requirements for hazardous substances
2. Confirm site incide procedures	2.1 Incident reporting processes are identified. 2.2 Emergency procedures are identified and confirmed.
3. Select handling techniques	<ul> <li>3.1 Load handling and shifting procedures are selected in accordance with identified requirements for particular goods.</li> <li>3.2 <i>Environmental issues</i> and concerns are practiced following workplace requirements.</li> </ul>
Range of Variables	

Variable	Range (may include but not limited to):
1. Hazards	<ul><li>1.1 Hazardous or dangerous materials</li><li>1.2 Contamination of or from materials</li><li>1.3 Noise</li><li>1.4 Light</li><li>1.5 Energy sources</li></ul>
2. Storage requirement	2.1 Short term storage 2.2 Long term storage 2.3 In transit
3. Environmental issues	3.1 Use of hazardous material 3.2 Waste disposal 3.3 Use of chemical related to furniture sector

1. Critical aspects of competency	Assessment required evidences that the candidate:  1.1 identified dangerous goods / hazardous substances   (from labels, IMDG markings, HAZCHEM signs and   other relevant identification criteria)  1.2 stated legislative requirements for hazardous   substances  1.3 identified and selected the safety requirements for   handling dangerous goods / hazardous substances  1.4 maintained workplace records and documentation.
2. Underpinning knowledge	<ul><li>2.1 Safety procedure for handling dangerous goods.</li><li>2.2 Safety requirements in handling hazardous chemicals.</li><li>2.3 Working with others.</li><li>2.4 Dangerous goods and / or hazardous substances and its handling process.</li></ul>
3. Underpinning skills	<ul><li>3.1 Reading skills required to interpret work instruction and numerical skills.</li><li>3.2 Communication skills.</li><li>3.3 Problem solving in emergency situation.</li></ul>

National Control of the Control of t	
4. Required attitudes	<ul> <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 Environmental concerns.</li> <li>4.5 Eagerness to learn.</li> <li>4.6 Tidiness and timeliness.</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> </ul>
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 5.3 materials and consumables needed 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 6.4 portfolio.
7. Context of assessment	<ul> <li>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</li> <li>7.2 Assessment should be done by a BTEB certified assessor.</li> </ul>
1	

Unit Title	Participate in Environmentally Sustainable Work Practices	
Unit Code	CERSS3004A1	
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to participate in environmentally sustainable work practices. It includes identifying environmental practices for ceramic sector, collaborating with co-workers and performing environmental awareness related to wood works.	
Nominal Hours	25 Hours	
Elements of Competency	Performance Criteria  Bold & Italicized terms are elaborated in the Range of Variables	
Identify     environmental     practices for     ceramic sector	<ul><li>1.1 Environmental practices in ceramic industry is identified.</li><li>1.2 Environmental practices for ceramic industry are practiced.</li></ul>	
2. Collaborate with co-workers	<ul><li>2.1 <i>Collaborative actions</i> and attitudes related to sustainable environmental practices are identified.</li><li>2.2 Collaborating with co-workers to deliver desired output is practiced as per industry requirements.</li></ul>	
3. Perform environmental awareness related to wood works	<ul><li>3.1 <i>Environmental issues</i> and concerns are identified and discussed.</li><li>3.2 Environmental issues and concerns are practiced following workplace requirements.</li></ul>	
Range of Variables		
Variable	Range (may include but not limited to):	
1. Collaborative action	1.1 Working with others s 1.2 Understanding others 1.3 Workmanship	
2. Environmental issue	2.1 Use of timber, hazardous materials 2.2 Waste disposal 2.3 Use of chemical related to furniture sector	

I make the second of the secon	
1. Critical aspects of competency	Assessment required evidences that the candidate:  1.1 demonstrated work values related to environmental sustainable practices  1.2 identified environmental issues.
2. Underpinning knowledge	<ul><li>2.1 Safety requirements in the workplace.</li><li>2.2 Working with others.</li><li>2.3 Environmental issues and concerns.</li><li>2.4 Collaborative actions.</li></ul>
3. Underpinning skills	<ul><li>3.1 Reading skills required to interpret work instruction and numerical skills.</li><li>3.2 Collaborating with co-workers.</li><li>3.3 Problem solving in emergency situation</li></ul>
4. Required attitudes	<ul> <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 Environmental concerns.</li> <li>4.5 Eagerness to learn.</li> <li>4.6 Tidiness and timeliness.</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> </ul>
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 5.3 materials and consumables needed 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 6.4 portfolio.

### 7. Context of assessment

- 7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.
- 7.2 Assessment should be done by a BTEB certified assessor.

#### **Accreditation Requirements**

Unit Title	Read and Interpret Work Documents	
Unit Code	CERSS3005A1	
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to read and interpret work documents. It includes identifying and accessing specification manuals, interpreting manual, performing work activities stated in the manual and storing manuals.	
Nominal Hours	25 Hours	
Elements of Competency	Performance Criteria  Bold & Italicized terms are elaborated in the Range of Variables	
Identify and access specification manuals	1.1 Specific manuals are identified and accessed as per job requirements.     1.2 Version and date of manual are checked to ensure that correct specification and procedures are identified.	
2. Interpret manual	<ul><li>2.1 Relevant sections, chapters of specifications / manuals are located in relation to the work to be conducted.</li><li>2.2 Information and procedure in the manual are interpreted in accordance with industry practices.</li></ul>	
3. Perform work activities stated in the manual	<ul> <li>3.1 <i>Manual</i> is interpreted according to job requirements.</li> <li>3.2 Work steps are correctly identified in accordance with manufacturer's specification.</li> <li>3.3 Manual data are applied according to the given task.</li> <li>3.4 All correct sequencing and adjustments are interpreted in accordance with information contained on the manual or specifications.</li> </ul>	
4. Store manuals	4.1 Manual or specification is stored appropriately to prevent damage, ready access and updating of information when required in accordance with company requirements.	
Range of Variables		

Variable		Range (may include but not limited to):
1. Manuals		1.1 Manufacturer's specification manual 1.2 Repair manual 1.3 Maintenance procedure manual 1.4 Periodic maintenance manual
		ntic, valid, sufficient, reliable, consistent, recent and nt version of the Unit of Competency.
Critical aspects of competency	1.1 iden job r 1.2 inter prac 1.3 appl task 1.4 store	ment required evidences that the candidate: tified and accessed specification/manuals as per requirements preted manuals in accordance with industry tices ied information in manuals according to the given ed manuals in accordance with company tirements.
2. Underpinning knowledge	2.2 Iden 2.3 Iden	uals used in ceramic sector. tification of symbols used in the manuals. tification of units of measurements. conversion.
3. Underpinning skills	num 3.2 Inter	ding skills required to interpret work instruction and erical skills preting manual blem solving skills in emergency situation.
4. Required attitudes	4.2 Pror 4.3 Sinc 4.4 Envi 4.5 Eag 4.6 Tidir 4.7 Res	nmitment to occupational health and safety inptness in carrying out activities were and honest to duties ronmental concerns erness to learn ness and timeliness pect for rights of peers and seniors in workplace nmunication with peers and seniors in workplace
5. Resource implication	5.1 work 5.2 requ perfo 5.3 mate	owing resources must be provided:  Explace (actual or simulated)  Fired manuals and physical facilities appropriate to orm activities  Fireils and consumables needed to perform wities.

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	<ul> <li>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</li> <li>7.2 Assessment should be done by a BTEB certified assessor.</li> </ul>

Bangladesh Technical Education Board (BTEB)

	Bangladesh Technical Education Board (BTEB)
The Occupational Specific Competen	ncias
The Cocupational Opeome Competen	

Unit Title Unit Code	Perform Decal Decoration  CERDEP1001A1  This unit covers the knowledge, skills and attitudes required to perform decal decoration. It includes following OSH
Unit Descriptor	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.
Nominal Hours	100 Hours
Elements of Competency	Performance Criteria  Bold & Italicized terms are elaborated in the Range of Variables
1. Follow OSH practices	<ul> <li>1.1 All safety requirements / regulations are adhered to before, during and after use.</li> <li>1.2 Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.</li> <li>1.3 Personal Protective Equipment (PPE) is worn and Occupational Safety and Health (OSH) instructions are followed according to job specification.</li> </ul>
2. Prepare ware and decal	<ul> <li>2.1 Ware is collected as per instruction / specification.</li> <li>2.2 Decal is selected and collected as per job requirement.</li> <li>2.3 Wares are wiped with cotton cloth as required.</li> <li>2.4 Defected wares are rectified or rejected as per enterprise procedure.</li> <li>2.5 Decal is cut of as per design / motif.</li> <li>2.6 Decal and ware are kept in the dust free place with required temperature.</li> </ul>
3. Apply decal on raw products	<ul> <li>3.1 Decal is dipping in the water tray as per specification.</li> <li>3.2 Decal is separated from transfer paper.</li> <li>3.3 Water is applied on ware as required.</li> <li>3.4 Decal is set on ware with specific position as per instruction.</li> <li>3.5 Decal is squeezing for removing air &amp; water from the ware.</li> <li>3.6 Ware is dried as required.</li> </ul>

	3.7 Ware is transferred for next action as per instruction		
	3.8 Production process is monitored and remedies the		
	problem if any.		
	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. Apply decal with	4.5 Decal is set on ware with specific position as per		
ambush powder	instruction.		
on raw products	4.6 Decal is squeezing 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.		
	5.1 Decal faults are identified and rectified that can occur		
	during the process in accordance with specification.		
5. Rectify routine	5.2 Records and log books are maintained as per		
problems	instruction.		
	5.3 Non-routine problems are identified and reported to		
	designated person.		
	6.1 <i>Tools and equipment</i> are cleaned, maintained and		
6. Clean and	stored as per workplace procedures.		
maintain work	6.2 Faulty and defective equipment is tagged and reported		
area, tools and equipment	in accordance with workplace procedures. 6.3 Work area is cleared and waste materials are removed		
equipinient	in accordance with workplace standards.		
Range of Variables	m accordance man nomprace etamatica.		
Variable			
variable			
1. Personal	1.1 Chemical musk		
Protective	1.1 Chemical musk 1.2 Apron		
	1.1 Chemical musk		
Protective Equipment (PPE)	1.1 Chemical musk 1.2 Apron 1.3 Hand gloves 2.1 Tiles		
Protective	1.1 Chemical musk 1.2 Apron 1.3 Hand gloves 2.1 Tiles 2.2 Table ware		
Protective Equipment (PPE)	1.1 Chemical musk 1.2 Apron 1.3 Hand gloves 2.1 Tiles		
Protective Equipment (PPE)	1.1 Chemical musk 1.2 Apron 1.3 Hand gloves 2.1 Tiles 2.2 Table ware		
Protective Equipment (PPE)	1.1 Chemical musk 1.2 Apron 1.3 Hand gloves  2.1 Tiles 2.2 Table ware 2.3 Sanitary ware		

4. Tools and materials	4.1 Squeeze rubber 4.2 Water tray 4.3 Cotton cloth 4.4 Shelf 4.5 Paper 4.6 Blade 4.7 Scissor 4.8 Table 4.9 Trolley
------------------------	--

Assessment required evidences that the candidate:		
Critical aspects     of competency	<ul> <li>1.1 cut decal as per design / motif;</li> <li>1.2 set decal on ware with specific position as per instruction;</li> <li>1.3 squeezed decal for removing air and water from the ware; and</li> <li>1.4 applied ambush powder on ware.</li> </ul>	
2. Underpinning knowledge	<ul><li>2.1 Decal application techniques.</li><li>2.2 Decal properties.</li><li>2.3 Properties of transfer paper.</li><li>2.4 Properties of ambush powder.</li><li>2.5 Causes of faults.</li></ul>	
3. Underpinning skills	<ul> <li>3.1 Cutting decal.</li> <li>3.2 Separating decal from paper.</li> <li>3.3 Setting decal.</li> <li>3.4 Squeezing decal.</li> <li>3.5 Applying ambush powder.</li> <li>3.6 Monitoring production process.</li> <li>3.7 Maintaining log book and records.</li> <li>3.8 Maintaining and storing tools and equipment.</li> </ul>	
4. Required attitudes	<ul> <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> </ul>	

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. Contexts of assessment	<ul> <li>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</li> <li>7.2 Assessment should be done by a BTEB certified assessor.</li> </ul>

Unit Title	Perform Hand Painting	
Unit Code	CERDEP1002A1  This unit covers the knowledge, skills and attitudes required.	
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to perform hand painting. 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.	
Nominal Hours	80 Hours	
Elements of Competency	Performance Criteria  Bold & Italicized terms are elaborated in the Range of Variables	
1. Follow OSH	<ul> <li>1.1 All safety requirements / regulations are adhered to before, during and after use.</li> <li>1.2 Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.</li> <li>1.3 <i>Personal Protective Equipment (PPE)</i> is worn and Occupational Safety and Health (OSH) instructions are followed according to job specification.</li> </ul>	
2. Prepare colour for painting	<ul> <li>2.1 Painting tools, equipment and materials are collected.</li> <li>2.2 Reagent are mixed with colour and prepared colour paste to adapt for painting as per job specification.</li> <li>2.3 Ware is collected as per instruction / specification.</li> <li>2.4 Rubber stamp is collected as per specification.</li> <li>2.5 Brush is collected as per Job requirement.</li> </ul>	
3. Paint objects on wheel	<ul> <li>3.1 Product is set on centre of wheel as required.</li> <li>3.2 Wheel is rotated as required.</li> <li>3.3 Colour is taken by brush.</li> <li>3.4 Brush is used as per standard procedure.</li> <li>3.5 Object is painted as per design and specific colour.</li> <li>3.6 Painted object is kept on shelf and sent for next operation.</li> </ul>	

4. Paint objects by hand	<ul> <li>4.1 Design is stamped on object as per specification.</li> <li>4.2 Colour is taken by brush.</li> <li>4.3 Brush or pen is used as per standard procedure.</li> <li>4.4 Object is painted according to stamped design as per specific colour.</li> <li>4.5 Painted object is kept on shelf and sent to the next operation.</li> </ul>
5. Rectify routine problems	<ul> <li>5.1 <i>Faults</i> are identified and rectified that can occur during the operation in accordance with enterprise procedure.</li> <li>5.2 Records and log books are maintained.</li> <li>5.3 Non-routine problems are identified and reported to designated person.</li> </ul>
6. Clean and maintain work area, tools and equipment	<ul> <li>6.1 Tools and equipment are cleaned, maintained and stored as per workplace procedures.</li> <li>6.2 Faulty and defective equipment is tagged and reported in accordance with workplace procedures.</li> <li>6.3 Work area is cleared and waste materials are removed in accordance with workplace standards.</li> </ul>
Range of Variables	
Variable	Range (may include but not limited to:)
variable	Hange (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 1.5 Hair net
Personal Protective	1.1 Chemical mask 1.2 Safety glasses / goggles 1.3 Gloves 1.4 Apron

4. Reagent	4.1 Solvent 4.2 Water 4.3 Gum
5. Faults	5.1 Thin application 5.2 Thick application 5.3 Matt 5.4 Crazing 5.5 Rolling 5.6 Crawling 5.7 Overlapping

meet all requirements of current version of the Unit of Competency.		
Critical aspects     of competency	Assessment required evidences that the candidate: 1.1 mixed colour and reagent; 1.2 centred objects; 1.3 rotated wheel; and 1.4 used brush for design.	
2. Underpinning knowledge	<ul><li>2.1 Colour properties.</li><li>2.2 Design concept.</li><li>2.3 Measurement concept.</li><li>2.4 Reagent mixing ratio.</li></ul>	
3. Underpinning skills	<ul><li>3.1 Mixing colour and reagent.</li><li>3.2 Centering objects.</li><li>3.3 Operating wheel.</li><li>3.4 3.3 Using brush.</li><li>3.5 Painting objects.</li><li>3.6 Identifying faults.</li></ul>	
4. Required attitudes	<ul> <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> </ul>	
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. Contexts of assessment	<ul> <li>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</li> <li>7.2 Assessment should be done by a BTEB certified assessor.</li> </ul>

### **Accreditation Requirements**

Unit Title	Perform Spray Painting
Unit Code	CERDEP1003A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to perform spray painting. It includes following OSH practices, preparing for spraying, spraying to objects, rectifying routine problems and cleaning and maintaining work area, tools and equipment.
Nominal Hours	80 Hours
Elements of Competency	Performance Criteria  Bold & Italicized terms are elaborated in the Range of Variables
1. Follow OSH practices	<ul> <li>1.1 All safety requirements / regulations are adhered to before, during and after use.</li> <li>1.2 Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.</li> <li>1.3 Personal Protective Equipment (PPE) is worn and Occupational Safety and Health (OSH) instructions are followed.</li> </ul>
2. Prepare for spraying	<ul> <li>2.1 Spray booth is prepared as per standard requirement.</li> <li>2.2 Spraying tools, equipment and materials are collected as per job requirement.</li> <li>2.3 Ware is collected as per instruction.</li> <li>2.4 Ware is wiped with cotton cloth as required.</li> <li>2.5 Reagent are mixed with colour and prepared colour paste to adapt for spraying as per job specification.</li> <li>2.6 Mixed colour is sieved as per specification.</li> <li>2.7 Compressor and exhaust system is checked.</li> <li>2.8 Spray gun is set and colour is poured as required.</li> </ul>
3. Spray to objects	<ul> <li>3.1 Product is set on work station as required.</li> <li>3.2 Colour is sprayed on product with spray gun as per workplace procedure.</li> <li>3.3 Ware is dried as required.</li> <li>3.4 Colour of excess portion of the ware is wiped out by cotton cloth in accordance with product specification.</li> </ul>

	<ul><li>3.5 Colour application is constantly checked against sample.</li><li>3.6 Faults are identified and rectified as required.</li><li>3.7 Sprayed product is kept on trolley and sent to next operation.</li></ul>
Rectify routine problems	<ul><li>4.1 Faults are identified and rectified that can occur during the operation in accordance with enterprise procedure.</li><li>4.2 Records and log books are maintained.</li><li>4.3 Non-routine problems are identified and reported to designated person.</li></ul>
5. Clean and maintain work area, tools and equipment	<ul> <li>5.1 Tools and equipment are cleaned, maintained and stored as per workplace procedures.</li> <li>5.2 Faulty and defective equipment is tagged and reported in accordance with workplace procedures.</li> <li>5.3 Work area is cleared and waste materials are removed in accordance with workplace standards.</li> </ul>
Range of Variables	
Variable	Range (may include but not limited to:)
Personal     Protective     Equipment (PPE)	1.1 Chemical musk 1.2 Safety glasses / goggles 1.3 Gloves 1.4 Apron 1.5 Hair net
2. Tools and equipment	2.1 Conveyor 2.2 Colour tray 2.3 Spray gun 2.4 Spray booth 2.5 Weighing balance 2.6 Cotton cloth 2.7 Colour mixer 2.8 Sieve 2.9 Drying chamber
3. Materials	3.1 Deferent colour 3.2 Deco flux
4. Reagent	4.1 Solvent 4.2 Water 4.3 Gum

meet all requirements of current version of the Unit of Competency.		
Critical aspects     of competency	Assessment required evidences that the candidate:  1.1 mixed colour and reagent;  1.2 sprayed colour; and  1.3 wiped out colour of excess portion of the ware.	
2. Underpinning knowledge	<ul><li>2.1 Colour properties.</li><li>2.2 Spray technique.</li><li>2.3 Air pressure.</li><li>2.4 Measurement concept.</li><li>2.5 Reagent mixing ratio.</li><li>2.6 Spray gun operation procedure.</li></ul>	
3. Underpinning skills	<ul> <li>3.1 Mixing colour and reagent.</li> <li>3.2 Operating spray gun.</li> <li>3.3 Operating air compressor.</li> <li>3.4 Wiping out colour of excess portion of the ware.</li> <li>3.5 Checking colour application constantly.</li> <li>3.6 Identifying faults.</li> </ul>	
4. Required attitudes	<ul> <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> </ul>	
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. Contexts of assessment

- 7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.
- 7.2 Assessment should be done by a BTEB certified assessor.

#### **Accreditation Requirements**

Unit Title	Make Screen
Unit Code	CERDEP2004A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to make screen. 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.
Nominal Hours	50 Hours
Elements of Competency	Performance Criteria  Bold & Italicized terms are elaborated in the Range of Variables
1. Follow OSH practices	<ul> <li>1.1 All safety requirements / regulations are adhered to before, during and after use.</li> <li>1.2 Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.</li> <li>1.3 Personal Protective Equipment (PPE) is worn and Occupational Safety and Health (OSH) instructions are followed according to job specification.</li> </ul>
2. Prepare for work	<ul><li>2.1 Screen <i>materials</i> are collected as per job requirement</li><li>2.2 <i>Machines</i> are prepared as required.</li><li>2.3 Machines are run as per operating procedure.</li></ul>
3. Set screen equipment in tension machine	<ul> <li>3.1 Frame is set in tension machine.</li> <li>3.2 Bolting cloth is set in the frame as per specification.</li> <li>3.3 Bond is applied and dried following standard procedure.</li> <li>3.4 Bolting cloth rim is cut off and gum tape is applied.</li> <li>3.5 Screen is labelled as per product specification.</li> </ul>
4. Prepare screen	<ul> <li>4.1 Emulsion coat is applied and screen is dried as per required.</li> <li>4.2 Positive film is set on screen as per required measurement.</li> <li>4.3 Screen is exposed by UV Exposure machine.</li> <li>4.4 Screen is washed and dried by dryer as required.</li> </ul>

	Bangladesh Technical Education Board (BTEB	
5. Rectify routine problems	<ul><li>5.1 Faults are identified and rectified that can occur during the operation in accordance with work instructions.</li><li>5.2 Non-routine problems are identified and reported to designated person.</li></ul>	
6. Clean and maintain work area, tools and equipment	<ul> <li>6.1 <i>Tools</i> and equipment are cleaned, maintained and stored as per workplace procedures.</li> <li>6.2 Faulty and defective equipment is tagged and reported in accordance with workplace procedures.</li> <li>6.3 Work area is cleared and waste removed following workplace procedures.</li> <li>6.4 Waste materials are removed in accordance with workplace standards.</li> </ul>	
Range of Variables		
Variable	Range (may include but not limited to:)	
Personal Protective     Equipment (PPE)	1.1 Chemical mask 1.2 Safety glasses / goggles 1.3 Gloves 1.4 Apron	
	2.1 Screen frame 2.2 Screen mesh 2.3 Adhesive	

2.4 Gum tape

2.7 Water 2.8 Solvent

3.6 Dryer

4.1 Cutter 4.2 Scissor

4.3 Brush

4.4 Squeeze rubber

2.5 Emulsion coat 2.6 Positive film

3.1 Tension machine 3.2 Air compressor 3.3 Coating machine

3.4 UV Exposure machine 3.5 Screen washing machine

2. Materials

3. Machine

4. Tools

<u> </u>	,
Critical aspects     of competency	Assessment required evidences that the candidate: 1.1 set screen mesh in the frame; 1.2 applied emulsion coat and dried screen; 1.3 set positive film on screen; and 1.4 exposed screen.
2. Underpinning knowledge	<ul> <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> </ul>
3. Underpinning skills	<ul> <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> </ul>
4. Required attitudes	<ul> <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> </ul>
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. Contexts of assessment

- 7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.
- 7.2 Assessment should be done by a BTEB certified assessor.

### **Accreditation Requirements**

Unit Title	Perform Screen Printing
Unit Code	CERDEP2005A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to perform screen printing. It includes following OSH practices, preparing for job, perform printing, rectifying routine problems and cleaning and maintain work area, tools and equipment.
Nominal Hours	60 Hours
Elements of Competency	Performance Criteria  Bold & Italicized terms are elaborated in the Range of Variables
1. Follow OSH practices	<ul> <li>1.1 All safety requirements / regulations are adhered to before, during and after use.</li> <li>1.2 Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.</li> <li>1.3 Personal Protective Equipment (PPE) is worn and Occupational Safety and Health (OSH) instructions are followed according to job specification.</li> </ul>
2. Prepare for job	<ul> <li>2.1 Tools and equipment are collected.</li> <li>2.2 Printing materials is collected as per job requirement.</li> <li>2.3 Air pipe is connected to printing machine.</li> <li>2.4 Blower is run as per requirement.</li> <li>2.5 Printing machine is cleaned in accordance with machine operation procedures.</li> <li>2.6 Squeeze rubber is sharpened as per job requirement.</li> <li>2.7 Squeeze is set in printing head as per manufacturer's instruction.</li> </ul>
3. Perform printing	<ul> <li>3.1 Screen is set in the machine frame as per specification.</li> <li>3.2 Colour is poured in the screen as per job specification.</li> <li>3.3 Machine is started as trail run, checked and compared product with sample.</li> </ul>

	<ul> <li>3.4 If trial production is similar with sample then printed continues as per operating procedure.</li> <li>3.5 Screen and squeeze rubber is washed as required.</li> <li>3.6 Colour is synchronized for multi-colour printing as per product design and repeat step 3.1 to 3.5.</li> <li>3.7 Screen is changed as required.</li> </ul>
Rectify routine problems	<ul> <li>4.1 Machine production is monitored to ensure product quality.</li> <li>4.2 <i>Faults</i> are identified and rectified that can occur during the operation in accordance with enterprise procedure.</li> <li>4.3 Non-routine problems are identified and report to designated persons.</li> </ul>
5. Clean and maintain work area, tools and equipment	<ul> <li>5.1 Tools and equipment are cleaned, maintained and stored as per workplace procedures.</li> <li>5.2 Faulty and defective tools and equipment is tagged and reported in accordance with workplace procedures.</li> <li>5.3 Work area is cleared and waste removed following workplace procedures.</li> <li>5.4 Waste materials are removed in accordance with workplace standards.</li> </ul>
Range of Variables	
Variable	Range (may include but not limited to:)
	1.1 Chemical mask
Personal Protective     Equipment (PPE)	1.2 Safety glasses / goggle 1.3 Gloves 1.4 Apron
	1.3 Gloves

	3.3 Gum tape
	3.4 Cotton cloth
	3.5 Water
	3.6 Precious material
	3.6.1 Gold
	3.6.2 Platinum
	3.6.3 Lustre
	3.7 Thinner
	4.1 Screen printing machine
4. Machine	4.2 Air compressor
4. Machine	4.3 Dryer
	4.4 Blower
	5.1 Thin application
	5.2 Thick application
5. Faults	5.3 Matt
	5.4 Crazing
	5.5 Spreading
	I

Critical aspects     of competency	Assessment required evidences that the candidate: 1.1 set screen in the machine frame; 1.2 set squeeze pressure; 1.3 synchronized colour; and 1.4 checked and compared product as required.
2. Underpinning knowledge	<ul><li>2.1 Machine operation procedure.</li><li>2.2 Screen and colour properties.</li><li>2.3 Measuring of density.</li><li>2.4 Causes of faults.</li></ul>
3. Underpinning skills	<ul><li>3.1 Operating machine.</li><li>3.2 Setting screen.</li><li>3.3 Setting and sharpening squeeze.</li><li>3.4 Synchronize colour.</li><li>3.5 Using piknometer.</li><li>3.6 Changing screen.</li></ul>
4. Required attitudes	<ul> <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> </ul>

	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. Contexts of assessment	<ul> <li>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</li> <li>7.2 Assessment should be done by a BTEB certified assessor.</li> </ul>

### **Accreditation Requirements**

Unit Title	Make Decal	
Unit Code	CERDEP2006A1	
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to make decal. It includes following OSH practices, preparing for job and decal, rectifying routine problems and cleaning and maintaining work area, tools and equipment.	
Nominal Hours	70 Hours	
Elements of Competency	Performance Criteria  Bold & Italicized terms are elaborated in the Range of Variables	
1. Follow OSH practices	<ul> <li>1.1 All safety requirements / regulations are adhered to before, during and after use.</li> <li>1.2 Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.</li> <li>1.3 Personal Protective Equipment (PPE) is worn and Occupational Safety and Health (OSH) instructions are followed according to job specification.</li> </ul>	
2. Prepare for job	<ul> <li>2.1 Decal <i>materials</i> are collected as per job requirement.</li> <li>2.2 All machines are prepared as required.</li> <li>2.3 Design is collected as per job requirement from designated place.</li> <li>2.4 Squeeze rubber is sharpened as require.</li> <li>2.5 Squeeze pressure is set as per design requirement.</li> <li>2.6 <i>Machine</i> is run as per standard operating procedure.</li> <li>2.7 Machine speed is set as per operation procedure.</li> <li>2.8 Dryer temperature is set as required.</li> </ul>	
3. Prepare decal	<ul> <li>3.1 Humidity and temperature is checked as required.</li> <li>3.2 Screen is set in the machine frame as per specification.</li> <li>3.3 Colour is poured in the screen as required.</li> <li>3.4 Machine is started for trial run, checked and compared with sample product.</li> <li>3.5 If trial production is similar with sample then printed continues as per operating procedure.</li> </ul>	

Rectify routine problems	<ul> <li>3.6 Printed papers are dried as required.</li> <li>3.7 Same operation is observed as above for deferent colour and cover coat.</li> <li>3.8 Screen and squeeze rubber is washed as required.</li> <li>3.9 Colour is synchronised as per product design.</li> <li>4.1 Machine production is monitored to ensure product quality.</li> <li>4.2 Faults are identified and rectified that can occur during the operation in accordance with procedures.</li> <li>4.3 Non-routine problems are identified and reported to</li> </ul>
5. Clean and maintain work area, tools and equipment  Range of Variables	<ul> <li>5.1 <i>Tools and equipment</i> are cleaned, maintained and stored as per workplace procedures.</li> <li>5.2 Faulty and defective tools and equipment is tagged and reported in accordance with workplace procedures.</li> <li>5.3 Work area is cleared and waste removed following workplace procedures.</li> <li>5.4 Waste materials are removed in accordance with workplace standards.</li> </ul>
Variable	Range (may include but not limited to:)
Personal Protective     Equipment (PPE)	1.1 Chemical musk 1.2 Safety glasses / goggles
Equipment (11 L)	1.3 Gloves 1.4 Apron
2. Materials	

	4.1 Thin application
4. Faults	4.2 Thick application
4. Faults	4.3 Matt
	4.4 Crazing
	5.1 Humidity and temperature meter
	5.2 Cutter
	5.3 Scissor
	5.4 Brush
	5.5 Squeeze rubber
5. Tools and	5.6 Tool set
equipment	5.7 Inner pliers
equipment	5.8 Outer pliers
	5.9 Wrench set
	5.10 Belt
	5.11 Hammer
	5.12 Measuring scale
	5.13 Weight balance

Critical aspects     of competency	Assessment required evidences that the candidate:  1.1 set screen in the machine frame;  1.2 set squeeze pressure;  1.3 synchronized colour;
	1.4 checked and compared product as required; and 1.5 dried printed papers as required.
2. Underpinning knowledge	<ul><li>2.1 Machine operation procedure.</li><li>2.2 Screen and colour properties.</li><li>2.3 Coating materials properties.</li><li>2.4 Tension.</li></ul>
3. Underpinning skills	<ul><li>3.1 Operating machine.</li><li>3.2 Setting screen.</li><li>3.3 Applying coating.</li><li>3.4 Setting squeeze.</li><li>3.5 Comparing colour with sample.</li></ul>

<ul> <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> </ul>
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.
Methods of assessment may include but not limited to: 6.1 written test; 6.2 demonstration; 6.3 oral questioning; and 6.4 portfolio.
<ul> <li>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</li> <li>7.2 Assessment should be done by a BTEB certified assessor.</li> </ul>

### **Accreditation Requirements**

Unit Title	Prepare Colour and Paste	
Unit Code	CERDEP3007A1	
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to prepare colour and paste. It includes following OSH practices, setting colour composition, performing colour mixing and making paste, rectify routine problems and cleaning and maintaining work area, tools and equipment.	
Nominal Hours	60 Hours	
Elements of Competency	Performance Criteria  Bold & Italicized terms are elaborated in the Range of Variables	
1. Follow OSH practices	<ul> <li>1.1 All safety requirements / regulations are adhered to before, during and after use.</li> <li>1.2 Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.</li> <li>1.3 Personal Protective Equipment (PPE) is worn and Occupational Safety and Health (OSH) instructions are followed according to job specification.</li> </ul>	
2. Set colour composition	<ul> <li>2.1 Special safety measures are taken before stat work.</li> <li>2.2 <i>Ceramic pigment</i>, <i>medium</i> and <i>solvent</i> are collected as per job requirement.</li> <li>2.3 Approximate proportion of colour pigment is created.</li> <li>2.4 Colours are weighted according to the proportion.</li> <li>2.5 Colour is mixed using medium to set composition.</li> <li>2.6 Proof print is performed.</li> <li>2.7 Test fire is performed.</li> <li>2.8 Approved the colour shade if the customer requirement is satisfied else repeat 2.2 to 2.6 by changing the proportion of the colours.</li> </ul>	
3. Perform colour mixing and make paste	<ul><li>3.1 Proportion of colour pigment and medium are weighted as per specification.</li><li>3.2 Colour is put into a <i>mixer machine</i> for making paste as per specification.</li></ul>	

	<ul><li>3.3 Paste is checked and verified as per instruction.</li><li>3.4 Paste is preserved for next operation.</li></ul>
Rectify routine problems	<ul> <li>4.1 Machine production is monitored to ensure product quality.</li> <li>4.2 Faults are identified and rectified that can occur during the operation in accordance with procedures.</li> <li>4.3 Non-routine problems are identified and reported to designated persons.</li> </ul>
5. Clean and maintain work area, tools and equipment	<ul> <li>5.1 <i>Tools and equipment</i> are cleaned, maintained and stored as per workplace procedures.</li> <li>5.2 Faulty and defective equipment is tagged and reported in accordance with workplace procedures.</li> <li>5.3 Work area is cleared and waste materials are removed in accordance with workplace standards.</li> </ul>

### **Range of Variables**

Variable	Range (may include but not limited to:)
Personal Protective     Equipment (PPE)	<ul> <li>1.1 Chemical mask</li> <li>1.2 Safety glasses / goggles</li> <li>1.3 Hair nets</li> <li>1.4 Ear muffs / plugs</li> <li>1.5 Gloves</li> <li>1.6 Footwear and protective clothing</li> </ul>
2. Ceramic pigment	2.1 On glaze color 2.2 In glaze color 2.3 Under glaze color
3. Medium	3.1 Liquid 3.2 Thick 3.3 Carboxyl Methyl Cellulose (CMC)
4. Solvents	4.1 Solvent-G 4.2 Solvent-Low
5. Mixer machine	5.1 Roller mixer 5.2 Drum mixer 5.3 Ball mill
6. Tools and equipment	<ul><li>6.1 Hopper</li><li>6.2 Storage tank</li><li>6.3 Granule supply controller</li><li>6.4 Weighing balance</li></ul>

meet all requirements of current version of the Unit of Competency.		
Critical aspects     of competency	Assessment required evidences that the candidate: 1.1 created approximate proportion of colour pigment; 1.2 performed proof print; 1.3 performed test fire; and 1.4 weighted proportion of colour pigment and medium.	
2. Underpinning knowledge	<ul><li>2.1 Properties of ceramic pigment, medium and solvent.</li><li>2.2 Calculation and measuring technique of the proportionate of colour.</li><li>2.3 Temperature effect in ceramic pigment.</li></ul>	
3. Underpinning skills	<ul> <li>3.1 Creating approximate proportion of colour pigment.</li> <li>3.2 Weighting colour according to the proportion.</li> <li>3.3 Mixing colour using medium.</li> <li>3.4 Performing proof print and test firing.</li> <li>3.5 Checking and verifying proper mixing.</li> </ul>	
4. Required attitudes	<ul> <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> </ul>	
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. Contexts of assessment

- 7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.
- 7.2 Assessment should be done by a BTEB certified assessor.

### **Accreditation Requirements**

Unit Title Unit Code	Operate Digital Printing Machine  CERDEP3008A1  This unit covers the knowledge, skills and attitudes required to operate digital printing machine. It includes following OSH
Unit Descriptor	practices, preparing for works, setting and operating machine, rectifying routine problems and cleaning and maintaining work area, tools and equipment.
Nominal Hours	80 Hours
Elements of Competency	Performance Criteria  Bold & Italicized terms are elaborated in the Range of Variables
1. Follow OSH practices	<ul> <li>1.1 All safety requirements / regulations are adhered to before, during and after use.</li> <li>1.2 Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.</li> <li>1.3 Personal Protective Equipment (PPE) is worn and Occupational Safety and Health (OSH) instructions are followed according to job specification.</li> </ul>
2. Prepare for works	<ul> <li>2.1 Air compressor machine is run as per operating procedure.</li> <li>2.2 Ceramic pigment ink is collected from store room as required.</li> <li>2.3 Machine room and machine conveyor belt are cleaned as per instruction.</li> <li>2.4 Design is collected from designer as per instruction.</li> <li>2.5 Anti-guider is checked and change if required.</li> <li>2.6 Ceramic pigment ink is shacked by Shaker as per manufacturer instruction.</li> </ul>
3. Set and operate machine	<ul> <li>3.1 Feeding and delivery line is adjusted according to ware specification.</li> <li>3.2 Machine mode is set according to laboratory mode.</li> <li>3.3 Design is loaded to the machine as per specification.</li> <li>3.4 Trial run is performed and adjusted if required.</li> <li>3.5 Machine speed, ware thickness and jetting gap are set as required.</li> </ul>

	<ul> <li>3.6 If trial production is similar with sample then printed continues as per operating procedure else identified the faults and repeat the process.</li> <li>3.7 Printing performance is monitored as required.</li> <li>3.8 Printing and nozzle line is monitored and cleaned if required.</li> <li>3.9 Ceramic pigment ink is poured when required.</li> </ul>
4. Rectify routine problems	<ul> <li>4.1 Faults are identified and rectified that can occur during the operation in accordance with work instructions.</li> <li>4.2 Print head and HPC failure are identified if required</li> <li>4.3 Print head is cleaned or changed by alpha wipe cloths in accordance with work instructions.</li> <li>4.4 Records and log books of machine operations are maintained.</li> <li>4.5 Non-routine problems are identified and reported to designated person.</li> </ul>
5. Clean and maintain work area, tools and equipment	<ul> <li>5.1 <i>Tools</i> and equipment are cleaned, maintained and stored as per workplace procedures.</li> <li>5.2 Faulty and defective equipment is tagged and reported in accordance with workplace procedures.</li> <li>5.3 Work area is cleared and waste removed following workplace procedures.</li> <li>5.4 Waste materials are removed in accordance with workplace standards.</li> </ul>
Range of Variables	
Variable	Range (may include but not limited to:)
Personal Protective     Equipment (PPE)	1.1 Mask 1.2 Special gloves 1.3 Apron 1.4 Goggles
2. Tools	2.1 Shaker 2.2 Tools set 2.3 Inner and outer pliers 2.4 Electric tester 2.5 Sponge 2.6 Blower 2.7 Wrench 2.8 Vacuum cleaner 2.9 Trolley 2.10 Bucket 2.11 Weighing balance 2.12 Scale

meet all requirements of current version of the Unit of Competency.		
Critical aspects     of competency	Assessment required evidences that the candidate: 1.1 controlled and operated print machine; 1.2 cleaned print head by alpha wipe cloths or change; 1.3 loaded design to the machine; 1.4 identified printing faults; and 1.5 feed ware.	
2. Underpinning knowledge	<ul><li>2.1 Basic computer operation.</li><li>2.2 Glaze properties.</li><li>2.3 Design load technique.</li><li>2.4 Ceramic pigment properties.</li><li>2.5 Thickness measurement techniques.</li></ul>	
3. Underpinning skills	<ul> <li>3.1 Operating air- compressor.</li> <li>3.2 Collecting and loading design.</li> <li>3.3 Operating printing machine.</li> <li>3.4 Setting ware thickness.</li> <li>3.5 Rectifying faults.</li> <li>3.6 Maintaining tools and equipment.</li> </ul>	
4. Required attitudes	<ul> <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> </ul>	
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. Contexts of assessment

- 7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.
- 7.2 Assessment should be done by a BTEB certified assessor.

### **Accreditation Requirements**

Unit Title	Store Decoration Raw Materials
Unit Code	CERDEP3009A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to store decoration raw materials. It includes following OSH practices, preparing store room, preserving materials to the store and cleaning and maintaining work area, tools and equipment.
Nominal Hours	30 Hours
Elements of Competency	Performance Criteria  Bold & Italicized terms are elaborated in the Range of Variables
1. Follow OSH practices	<ul> <li>1.1 All safety requirements / regulations are adhered to before, during and after use.</li> <li>1.2 Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.</li> <li>1.3 Personal Protective Equipment (PPE) is worn and Occupational Safety and Health (OSH) instructions are followed according to job specification.</li> </ul>
2. Prepare store room	<ul> <li>2.1 Temperature of the store room is maintained as per manufacturer specification.</li> <li>2.2 <i>Hazardous materials</i> are identified as per manufacturer instruction.</li> <li>2.3 Labelling is performed as per enterprise instruction.</li> <li>2.4 Materials Safety Data sheet (MSDS) is maintained as per instruction.</li> <li>2.5 Power apparatus is kept in safe place in accordance with safety rules.</li> <li>2.6 Equipment is used to ensure safety.</li> </ul>
3. Preserve materials to the store	<ul> <li>3.1 <i>Precise materials</i> are kept in fridge or air condition system accordance with manufacturers instruction.</li> <li>3.2 Suffocative system is maintained as per health and safety rules.</li> <li>3.3 Solid materials are stored in designated places in the store room.</li> <li>3.4 Liquid materials container are stored on the tray in the</li> </ul>

	designated places.  3.5 Inventory is maintained and controlled as per enterprise procedure.	
4. Clean and maintain work area, tools and equipment	<ul> <li>4.1 Tools and equipment are cleaned, maintained and stored as per workplace procedures.</li> <li>4.2 Faulty and defective equipment is tagged and reported in accordance with workplace procedures.</li> <li>4.3 Work area is cleaned and waste removed following workplace procedures.</li> <li>4.4 Waste materials are removed in accordance with workplace standards.</li> </ul>	
Range of Variables		
Variable	Range (may include but not limited to:)	
Personal Protective     Equipment (PPE)	1.1 Mask 1.2 Hair nets 1.3 Gloves 1.4 Apron	
2. Hazardous materials	2.1 Lead base ceramic pigment 2.2 Cadmium base pigment 2.3 Cover coat 2.4 Solvent materials 2.5 Medium	
3. Precise materials	<ul><li>3.1 Gold</li><li>3.2 Platinum</li><li>3.3 Gold based colour</li></ul>	
Evidence Guide		
The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.		
Critical aspects     of competency	Assessment required evidences that the candidate 1.1 maintained temperature of the store room; 1.2 identified hazardous materials; 1.3 maintained Materials Safety Data sheet (MSDS); and 1.4 maintained suffocative system.	
2. Underpinning knowledge	<ul> <li>2.1 Health hazard martials, their effect in environment and human body.</li> <li>2.2 Inventory management system.</li> <li>2.3 Different kinds of store materials.</li> <li>2.4 Materials storing technique.</li> <li>2.5 Computerized inventory system.</li> </ul>	

3. Underpinning skills	<ul> <li>3.1 Maintaining temperature.</li> <li>3.2 Identify hazarded and non-hazard materials.</li> <li>3.3 Labelling.</li> <li>3.4 Maintaining MSDS.</li> <li>3.5 Keeping power apparatus in safe.</li> <li>3.6 Maintaining suffocative system.</li> </ul>
4. Required attitudes	<ul> <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> </ul>
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. Contexts of assessment	<ul> <li>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</li> <li>7.2 Assessment should be done by a BTEB certified assessor.</li> </ul>

### **Accreditation Requirements**

Unit Title	Monitor and Control Defects
Unit Code	CERDEP4010A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to monitor and control defects. It includes following OSH practices, checking and detecting problems of ware and tiles, solving problems and cleaning and maintaining work area, tools and equipment.
Nominal Hours	50 Hours
Elements of Competency	Performance Criteria  Bold & Italicized terms are elaborated in the Range of Variables
1. Follow OSH practices	<ul> <li>1.1 All safety requirements/regulations are adhered to before, during and after use;</li> <li>1.2 Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use;</li> <li>1.3 Personal Protective Equipment (PPE) is worn and Occupational Safety and Health (OSH) instructions are followed according to job specification.</li> </ul>
2. Check and detects problems of ware	<ul> <li>2.1 Tools and equipment are collected as per job requirement.</li> <li>2.2 Ensure that correct wares are selected as per instructions.</li> <li>2.3 Observed that decal is applied in appropriate position.</li> <li>2.4 Product is checked that any water remains under the cover coat.</li> <li>2.5 Product size and curve is checked of the ware before making layout.</li> <li>2.6 Screen quality is maintained as per specification.</li> </ul>

3. Check and detects problems of tiles	<ul> <li>3.1 Observed that design is applied on product through screen in appropriate position.</li> <li>3.2 Design is checked to ensure two or more screen is synchronize as per instruction.</li> <li>3.3 Product size and bent is checked of the ware before setting screen.</li> <li>3.4 Product overlapping problem is checked to maintain quality.</li> <li>3.5 Printing line and colour drop is checked in accordance with specification.</li> <li>3.6 Screen setting position and jetting gap is monitored to minimize rough surface in accordance with quality standard.</li> <li>3.7 Entrance guider is monitored to avoid friction in between guider and product.</li> <li>3.8 Screen quality is maintained as per specification.</li> </ul>	
4. Solve problems	<ul> <li>4.1 <i>Colour qualities</i> are checked and rectified as per design.</li> <li>4.2 <i>Print qualities</i> are checked and certified as per specification.</li> <li>4.3 <i>Dust</i> free products are ensured as per qualities requirements.</li> <li>4.4 Painting qualities are checked and certified as per design specification.</li> <li>4.5 Entrance guider are changed if required.</li> <li>4.6 Printing line are removed with alpha wipe cloth in</li> <li>4.7 accordance with procedure.</li> </ul>	
5. Clean and maintain work area, tools and equipment	<ul> <li>5.1 Tools and equipment are cleaned, maintained and stored as per workplace procedures.</li> <li>5.2 Faulty and defective equipment is tagged and reported in accordance with workplace procedures.</li> <li>5.3 Work area is cleared and waste removed following workplace procedures.</li> <li>5.4 Waste materials are removed in accordance with workplace standards.</li> </ul>	
Range of Variables	Range of Variables	
Variable	Range (may include but not limited to:)	

Personal Protective     Equipment (PPE)	1.1 Chemical musk 1.2 Safety glasses / goggles 1.3 Special gloves 1.4 Footwear and protective clothing
2. Tools and equipment	<ul><li>2.1 Magnifying glass</li><li>2.2 Measuring scale</li><li>2.3 Weighing balance</li><li>2.4 Calculator</li><li>2.5 Alpha wipe paper / cloth</li></ul>
3. Screen quality	3.1 Screen tension 3.2 Screen mesh (bolting clothes) 3.3 Degree of film (positives) 3.4 Expose of screen
4. Colour qualities	4.1 Colour mixing 4.2 Colour contrast 4.3 Colour density 4.4 Vacuum set point 4.5 Colour tank temperature
5. Print qualities	5.1 Registration 5.2 Drying 5.3 Synchronize 5.4 Overlap 5.5 Corner broken 5.6 Colour drop 5.7 Colour dry 5.8 Rough surface
6. Dust	6.1 Metal particle 6.2 Air dust 6.3 Ware dust / particle

Critical aspects     of competency	Assessment required evidences that the candidate:
	1.1 applied the decal in appropriate position and checked that any water remains under the decal;
	1.2 checked the size and curve of the ware before making layout / design;
	1.3 maintained screen quality, colour qualities and print qualities; and
	1.4 checked and certified painting qualities.

2. Underpinning knowledge	<ul><li>2.1 Design interpretation.</li><li>2.2 Colour separation.</li><li>2.3 Qualities of screen, colour, printing and painting.</li><li>2.4 Density measurement technique.</li><li>2.5 Colour temperature.</li></ul>
3. Underpinning skills	<ul><li>3.1 Machine operating.</li><li>3.2 Adjusting parameters.</li><li>3.3 Identifying defects.</li></ul>
4. Required attitudes	<ul> <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> </ul>
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. Contexts of assessment	<ul> <li>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</li> <li>7.2 Assessment should be done by a BTEB certified assessor.</li> </ul>

### **Accreditation Requirements**

Unit Title	Customize Design and Make Positive
Unit Code	CERDEP4011A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to make product by battery casting line process. It includes following OSH practices, preparing mould for casting process, filling the mould, maintaining the casting thickness and time, removing green product from mould, achieving the desired green product and cleaning and maintaining work area, tools and equipment.
Nominal Hours	60 Hours
Elements of Competency	Performance Criteria  Bold & Italicized terms are elaborated in the Range of Variables
1. Follow OSH practices	<ul> <li>1.1 All safety requirements / regulations are adhered to before, during and after use.</li> <li>1.2 Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.</li> <li>1.3 Personal Protective Equipment (PPE) is worn and Occupational Safety and Health (OSH) instructions are followed according to job specification.</li> </ul>
2. Collect materials and prepare profile	<ul> <li>2.1 Design object is collected from designated person.</li> <li>2.2 <i>Materials</i> are collected as per job requirement.</li> <li>2.3 Colour is identified to create profile maintaining the International Colour Council (ICC) code.</li> <li>2.4 Profile is installed in Photoshop and Illustrator as per procedure.</li> <li>2.5 Colour profile is applied in design as per job requirement.</li> </ul>
3. Use profile in design	<ul> <li>3.1 Design is selected as per job requirement.</li> <li>3.2 Design is converted and/or assigned to profile.</li> <li>3.3 Design colour is adjusted in accordance with specification.</li> <li>3.4 Colour separation scheme is made by ADOBE Photoshop / Illustrator.</li> <li>3.5 Measurement is set according to object requirement.</li> </ul>

	3.6 Positive is printed according to job specification by image setter/ printer.
	3.7 Design is labelled as per product specification.
	3.8 Design is modified if needed in accordance with
	specification.
	3.9 Layout is made as per specification.
4	4.1 Faults are identified and rectified that can occur during
	the operation.
	4.2 Causes of equipment failure are identified and rectified
4. Rectify routine	or change in accordance with work instructions.
problems	4.3 Records and log books are maintained according to
	enterprise procedure.
	4.4 Non-routine problems are identified and reported to
	designated person.
	5.1 <i>Tools and equipment</i> are maintained and stored as
	per workplace procedures.
5. Clean and	5.2 Faulty and defective equipment is tagged and reported
maintain work	in accordance with workplace procedures.
1.30.0000000000000000000000000000000000	5.3 Work area is cleared and waste removed following
equipment	workplace procedures.
	5.4 Waste materials are removed in accordance with
	workplace standards.

### Range of Variables

Variable	Range (may include but not limited to:)
1. Personal	1.1 Mask
Protective	1.2 Safety glasses / goggles,
Equipment (PPE)	1.3 Gloves
Equipment (1 1 L)	1.4 Footwear and protective clothing
	2.1 Film
2. Materials	2.2 Developer
	2.3 Fixer
	2.4 Paper
	2.5 Photo paper
	2.6 CD
	3.1 I profiler
	3.2 Scanner
3. Tools and	3.3 Computer
equipment	3.4 Pen drive
	3.5 Image setter
	3.6 Colour printer

meet all requirements of current version of the Unit of Competency.		
Critical aspects     of competency	Assessment required evidences that the candidate: 1.1 identified colour to create profile; 1.2 applied colour profile in design; 1.3 adjusted design colour; and 1.4 made colour separation for design.	
2. Underpinning knowledge	<ul> <li>2.1 ADOBE Photoshop and Illustrator.</li> <li>2.2 Colour separation.</li> <li>2.3 Design size and measurement.</li> <li>2.4 Profile creating.</li> <li>2.5 Equipment failure causes.</li> <li>2.6 Importance and uses of design and application software.</li> </ul>	
3. Underpinning skills	<ul> <li>3.1 Operating computer.</li> <li>3.2 Creating profile.</li> <li>3.3 Adjusting colour.</li> <li>3.4 Taking measurement.</li> <li>3.5 Making layout.</li> <li>3.6 Output positive.</li> <li>3.7 Maintaining equipment.</li> </ul>	
4. Required attitudes	<ul> <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> </ul>	
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. Contexts of assessment

- 7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.
- 7.2 Assessment should be done by a BTEB certified assessor.

### **Accreditation Requirements**

Unit Title	Make Sample Product
Unit Code	CERDEP4012A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to make sample product. It includes following OSH practices, collecting materials, preparing for make sample, preparing sample and cleaning and maintaining work area, tools and equipment.
Nominal Hours	90 Hours
Elements of Competency	Performance Criteria  Bold & Italicized terms are elaborated in the Range of Variables
1. Follow OSH practices	<ul> <li>1.1 All safety requirements /regulations are adhered to before, during and after use.</li> <li>1.2 Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.</li> <li>1.3 <i>Personal Protective Equipment (PPE)</i> is worn and Occupational Safety and Health (OSH) instructions are followed according to job specification.</li> </ul>
2. Collect materials	<ul><li>2.1 Design object is collected from designed person.</li><li>2.2 <i>Materials</i> are collected as per job requirement.</li></ul>
3. Prepare for making sample	<ul> <li>3.1 Ware is collected as per job requirement.</li> <li>3.2 Size of ware and curve are checked in accordance with specification.</li> <li>3.3 Design soft copy is collected as per procedure.</li> <li>3.4 Colour is separated and positive is output.</li> </ul>
4. Prepare sample	<ul> <li>4.1 <i>Colour</i> is matched with original design.</li> <li>4.2 Design screen is made according to procedure.</li> <li>4.3 Design is proofed as per customer requirement.</li> <li>4.4 Cover coat is applied and dried as per design specification.</li> <li>4.5 Decal is applied to sample ware as per standard</li> </ul>

Bangladesh Technical Education Board (BTE	
	process. 4.6 Test fire is performed and desired output is certified.
5. Clean and maintain work area, tools and equipment	<ul> <li>5.1 Tools and equipment are cleaned, maintained and stored as per workplace procedures.</li> <li>5.2 Faulty and defective equipment is tagged and reported in accordance with workplace procedures.</li> <li>5.3 Work area is cleared and waste removed following workplace procedures.</li> <li>5.4 Waste materials are removed in accordance with workplace standards.</li> </ul>
Range of Variables	
Variable	Range (may include but not limited to:)
Personal Protective     Equipment (PPE)	<ul><li>1.1 Mask</li><li>1.2 Safety glasses / goggles</li><li>1.3 Gloves</li><li>1.4 Footwear and protective clothing</li></ul>
2. Materials	2.1 Ceramic pigment 2.2 Medium 2.3 Solvent 2.4 Thinner 2.5 Cover coat 2.6 Transfer paper 2.7 Bolting cloths 2.8 Film 2.9 Developer 2.10 Cotton cloths
3. Colour	3.1 On glaze colour 3.2 In glaze colour 3.3 Under glaze colour 3.4 Colour composition
4. Tools and equipment	<ul> <li>4.1 Measuring scale</li> <li>4.2 Scissor</li> <li>4.3 Cutter</li> <li>4.4 Magnifying glass</li> <li>4.5 Weighing balance</li> <li>4.6 Mortar pastel</li> <li>4.7 Spatula</li> </ul>

meet all requirements of current version of the Unit of Competency.		
Critical aspects     of competency	Assessment required evidences that the candidate 1.1 checked size of ware and curve; 1.2 separated colour and printed positive; 1.3 matched colour with original design; and 1.4 proofed design.	
2. Underpinning knowledge	<ul><li>2.1 Uses of Photoshop and Illustrator.</li><li>2.2 Design size and measurement.</li><li>2.3 Colour separation.</li><li>2.4 Colour composition.</li><li>2.5 Screen properties.</li></ul>	
3. Underpinning skills	<ul> <li>3.1 Operating machine.</li> <li>3.2 Proofing print document.</li> <li>3.3 Applying and drying cover coat.</li> <li>3.4 Applying decal to sample ware.</li> <li>3.5 Performing test fire.</li> <li>3.6 Certifying desired output.</li> </ul>	
4. Required attitudes	<ul> <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> </ul>	
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. Contexts of assessment

- 7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.
- 7.2 Assessment should be done by a BTEB certified assessor.

#### **Accreditation Requirements**

Unit Title	Apply Quality Standards
Unit Code	CERGLZ4013A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to apply quality standards. It includes assessing own work, quality of received components, parts or materials, measuring components, parts or materials and investigating causes of quality deviations.
Nominal Hours	30 Hours
Elements of Competency	Performance Criteria  Bold & Italicized terms are elaborated in the Range of Variables
1. Assess own work	<ul> <li>1.1 Completed work is checked continuously as per workplace standards relevant to <i>competitive systems</i> and practices.</li> <li>1.2 Faulty components, products and processes are Identified and isolated.</li> <li>1.3 Faults and any identified causes to the supervisor concerned is recorded and/or reported, where required, in accordance with workplace procedures.</li> </ul>
2. Assess quality of received components, parts or materials	<ul> <li>2.1 Received components, parts, materials, information, service are checked with <i>quality parameters</i> continuously as per workplace standards and specifications.</li> <li>2.2 <i>Quality checks</i> is performed to identify faults.</li> <li>2.3 Faults and any identified causes is recorded and / or reported in accordance with workplace procedures.</li> <li>2.4 Faults are identified and rectified as specified in workplace procedures.</li> </ul>
3. Measure components, parts or materials	<ul><li>3.1 Measuring instruments are selected and collected as required.</li><li>3.2 Materials, component, parts, information, service and products are measured in accordance with workplace procedures.</li></ul>

# 4. Investigate causes of quality deviations

- 4.1 Causes of deviations from specified quality standards for components are Investigated and reported.
- 4.2 Causes of deviations from specified quality standards of materials are identified.
- 4.3 Suitable preventative action based on workplace quality standards is recommended.

### Range of Variables

Variable	Range (may include but not limited to:)
Competitive     systems and     practices	1.1 Lean operations 1.2 Agile operations 1.3 5S 1.4 Kaizen
2. Quality parameters	2.1 Finish 2.2 Size 2.3 Durability
3. Quality checks	3.1 Visual inspection 3.2 Physical measurements

#### **Evidence Guide**

	Assessment required evidences that the candidate:
Critical aspects     of competency	<ul> <li>1.1 assessed quality of received components, parts or materials</li> <li>1.2 measured components, parts or materials</li> <li>1.3 investigated causes of quality deviations</li> <li>1.4 checked and measured relevant quality parameters.</li> </ul>
2. Underpinning knowledge	<ul><li>2.1 Relevant quality standards, policies and procedures.</li><li>2.2 Relevant production processes, materials and products.</li><li>2.3 Workplace procedures.</li><li>2.4 Reporting procedures.</li></ul>
3. Underpinning skills	<ul><li>3.1 Interpreting work instructions.</li><li>3.2 Carrying out visual inspections.</li><li>3.3 Meeting work specifications.</li><li>3.4 Interpreting and applying defined procedures.</li></ul>

-	
4. Required attitudes	<ul> <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> </ul>
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. Contexts of assessment	<ul> <li>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</li> <li>7.2 Assessment should be done by a BTEB certified assessor.</li> </ul>

### **Accreditation Requirements**

### **Acknowledgements**

The Bangladesh Skills for Employability and Productivity (BSEP) Project of ILO Country Office for Bangladesh gratefully acknowledge the important contributions and guidance provided by the following members of the Technical Sub Committee in the development and validation of the competency standards for Body and Glaze Preparing:

- Mr. Md. Delwar Hussain Additional Chief Chemist, BISF Ltd, Dhaka.
- Mr. Md. Shamsuddin
   Asst. General Manager (Production)
   Akij Ceramics Ltd. Dhaka.
- Mr. Md. Abdullah Al Mamun Manager (R&D) Monno Ceramic Industries Ltd, Dhaka.
- Mr. Shaheedul Islam
   Deputy Manager
   Mir Ceramics Ltd. Dhaka
- Mr. Muhammad Ali Azam Khan Mojahadi Junior Instructor (Technical)
   Bangladesh Institute of Glass and Ceramics, Dhaka
- Mr. Zahedi Hassan Chowdhury Coordinator Ceramic ISC, Dhaka.
- 7. Mr. M Shahjahan
  Deputy Director (Course Accreditation)
  Bangladesh Technical Education Board, Dhaka
- 8. Mr. Md. Shah Alam Majumder Specialist (Course Accreditation) Bangladesh Technical Education Board, Dhaka

### Mr. Md. Serajul Islam Programme Officer, ILO-B-SEP Project, Dhaka

In addition, the BSEP Project would like to thank **Industry Skills Council for Ceramic Sector**, for their support in developing these standards. The ISC has been always very responsive in providing administrative and technical support in the development of the said standards.

Md. Serajul Islam
Program Officer
TVET Quality and Relevance, B-SEP Project
ILO Country Office for Bangladesh

Gabriel Genaro H. Bordado, V Technical Advisor TVET Quality and Relevance B-SEP Project ILO Country Office for Bangladesh

These Competency Standards has been validated on 20 March,2017 at the Hotel Amari, Gulsan, Dhaka. In connection, the Bangladesh Skills for Employability and Productivity (B-SEP) Project of ILO Country Office for Bangladesh gratefully acknowledge the important contribution provided by the following members of the Validation group for validating the competency standards for Body and Glaze Preparing.

