



**Government of the People's Republic of Bangladesh**  
**Skills Development Project**



# National Competency Standards for Painting

Qualification Title: **National Skills Certificate (NSC)-II in Painting**  
(Construction Sector)

Qualification Code: **CONPNT0802**



**BANGLADESH TECHNICAL EDUCATION BOARD**

*May-2014*

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## Approval Sheet

The National Competency Standards for **National Skills Certificate-II Painting (Construction Sector)** Qualification is a document developed by the Technical sub Committee for painting under the Skills Development Project ADB Loan 2425–BAN (SF).

It was approved by the Bangladesh Technical Education Board (BTEB) upon the endorsement of the Industry Skills Council at a meeting held on 24-01-2014 at BTEB CBT cell.

The Standard was also approved by Standard and Curriculum Development Committee (SCDC) on 15-4-2014 at BTEB conference room.

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## **Preface**

The TVET system has a large role to play in economic growth and social development as workforce provider to the labor market and as provider of skills to those who are looking for employment. In the case of Bangladesh, the TVET sector needs major reforms to ensure that issues of quality and capacity, relevance, and access are properly addressed.

*Bangladesh Technical Education Board*

The Directorate of Technical Education (DTE) with funding from the Asian Development Bank (ADB), Swiss Agency Development for Cooperation SDC and the Government of Bangladesh (GoB) is implementing a project known as Skills Development Project (SDP). The main target of the Skills Development Project (SDP) is to improve the relevance of TVET in labor market by introducing competency-based training system: a system that proceeds from the development of a qualifications framework, competency standards, curriculum, training delivery, assessment, and quality assurance mechanisms in order to develop a competitive workforce.

The development of competency standards is regarded as the heart of a competency-based training regime. Each standard defines sets of knowledge, skills and attitudes (KSAs) that a Bangladeshi trainee should be able to demonstrate at a recognized level of competence. It provides a common framework of outcomes between the labor and education sectors, as well as among workers, trainers and trainees.

In the process of development, Industry Skills Council (ISCs) were organized to determine competencies expected of an occupation in Bangladesh. The ISC, whose membership come from “top performers” in the industry, performed occupational, competency and unit analyses based on their rich experiences in the field, existing documents, and on the advice of national and international experts. Competency standards of Sri Lanka, Philippines, Australia, Korea, Malaysia, Maldives and other countries were examined.

A series of workshops development, review and finalization - were conducted to ensure a workable National Competency Standards for the occupation. Further, a validation instrument was developed and administered to other top industry performers to verify and confirm the draft being developed.

It is hoped that this document reflects the real needs of the industry thereby providing a concrete basis for the curriculum development and assessment. In such a way, the development of relevant and competent workforce is not farfetched.

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## **Contents**

Copyright .....	1
Approval Sheet .....	2

Contents.....	4
Acronyms .....	5
Section 1. The Qualification.....	6
Section -2: National Competency Standards for National Skills Certificates in..	7
Painting.....	<b>Error! Bookmark not defined.</b>
Generic Competencies.....	8
Sector Specific Competencies .....	8
Occupation Specific Competencies .....	8
The Summary of Units of Competencies .....	9
Sector Specific Competencies .....	10
Occupation Specific Competencies .....	10
Section 3. The Sector Specific Competencies .....	10
Perform measurement and calculations in painting.....	11
Maintain tools and equipment .....	15
Section 4. The Occupation Specific Competencies .....	20
Perform distempering .....	20
Perform aluminum painting .....	24
Perform plastic emulsion painting (inner plastered surface).....	28
Perform weather coat painting.....	32
Perform synthetic enamel painting .....	36
Annexes .....	41
Annex 1. Competency map for painter in Construction sector.....	41
Annex 2. Bangladesh National Qualifications Framework .....	42
Annex 3. Qualification Level Descriptors .....	43
Annex 4. Key for coding .....	44
Acknowledgments.....	45

### Acronyms

MoE	Ministry of Education
DG	Director General

DTE	Directorate of Technical Education
SDP	Skills Development Project
PD	Project Director
PIU	Project Implementation Unit
GOB	Government of Bangladesh
ADB	Asian Development Bank
SC	Swiss contact
ANTA	Australian National Training Authority
APEC	Asia Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
BMET	Bureau of Manpower Employment and Training
NTVQ	National Technical Vocational Qualification
NTVQF	National Technical Vocational Qualification Framework
BTEB	Bangladesh Technical Education Board
CBT	Competency Based Training
CS	Competency Standard
HSC (Voc)	Higher Secondary Certificate (Vocational)
KSA	Knowledge, Skills, Attitude
MoLE	Ministry of Labor and Employment
NTVQF	National Technical Vocational Qualification Framework
NTVQ	National Technical Vocational Qualification
OHS	Occupational Health and Safety
PSC	Project Steering Committee
RMG	Ready Made Garments
RPL	Recognition of Prior Learning
SSC (Voc)	Secondary School Certificate (Vocational)
STEP	Skills and Training Enhancement project (WB)
ISC	Industry Sector Committee
TESDA	Technical Education and Skills Development Authority
TL	Team Leader
TSC	Technical Sub Committee
TVET	Technical and Vocational Education and Training
WB	World Bank
DACUM	Development of a Curriculum
CBLM	Competency based learning Materials

## Section 1. The Qualification

1. Title of Qualification: National Skills Certificate-II in Painting (Construction Sector)	
2. Qualification code: CONPNT0802	3. Endorsement date: 10 April, 2012
4. Purpose of the qualification	The NSC II in Painting Qualification consists of a set of competencies that a person must achieve in order to work competently in the Construction Sector as a Painter.  In particular, he/she should be able to: 1. Perform distempering 2. Perform aluminum painting 3. Perform plastic emulsion painting 4. Perform weather coat painting 5. Perform synthetic enamel painting
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 in Section 2.
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	Chairperson Bangladesh Technical Education Board (BTEB) Agargaon, Sher-E-Bangla Nagar, Dhaka-1207

## Section-2: National Competency Standards for National Skills Certificate in Painting



**Generic Competencies:**

Code	Unit of Competency	Level	No. of hrs.
GN0101	Communicate in the workplace	1	30
GN0102	Work in a team environment	1	18
GN0103	Practice workplace cleanliness	1	18
GN0104	Practice occupational health and safety	1	30
GN0305	Lead Small team	3	18
GN0306	Demonstrate work values	3	18
GN0307	Practice negotiation skills	3	24
Total			156 hrs

**Sector Specific Competencies:**

Code	Unit of Competency	Level	No. of Hrs.
CON0101	Work in the construction sector	1	24
CON0102	Interpret drawings and specifications in construction manuals	1	30
CON0103	Use hand tools and power tools for the construction sector	1	30
CON0204	Perform measurement and calculations in painting	2	48
CON0205	Maintain tools and equipment	2	30
Total			162 hrs

**Occupation Specific Competencies:**

<b>Code</b>	<b>Unit of Competency</b>	<b>Level</b>	<b>No. of Hrs.</b>
CONPNT0101	Prepare tools, equipment and materials for painting	1	45
CONPNT0102	Prepare surface for white washing.	1	45
CONPNT0103	Perform white washing	1	45
CONPNT0104	Perform color washing	1	45
CONPNT0205	Perform distempering	2	42
CONPNT0206	Perform aluminum painting	2	42
CONPNT0207	Perform plastic emulsion painting	2	48
CONPNT0208	Perform weather coat painting	2	30
CONPNT0209	Perform synthetic enamel painting	2	30
CONPNT0310	Perform cement painting	3	45
CONPNT0311	Perform spray painting	3	45
CONPNT0312	Perform varnishing	3	45
CONPNT0313	Perform French polishing	3	40
CONPNT0314	Perform estimate for painting	3	35
Total			582
<b>Grand Total</b>			900 hours

### **The Summary of Units of Competencies**

The units of competencies this qualification are summarized as follows:

**Sector Specific Competencies:**

Code	Unit of Competency	Level	No. of Hrs
CON0204	Perform measurement and calculations in painting	2	48
CON0205	Maintain tools and equipment	2	30
<b>Total</b>			78 hrs

**Occupation Specific Competencies:**

Code		Level	No. of Hrs
CONPNT0205	Perform distempering	2	42
CONPNT0206	Perform aluminum painting	2	42
CONPNT0207	Perform plastic emulsion painting	2	48
CONPNT0208	Perform weather coat painting	2	30
CONPNT0209	Perform synthetic enamel painting	2	30
<b>Total</b>			192 hrs
Grand Total			270 hrs

**Section-3. The Sector Specific Competencies**

Unit of Competency	<b>Perform measurement and calculations in painting</b>
Unit Code	CON0204
Unit Descriptor	This unit covers the knowledge skills and attitude required to perform measurements and calculations relating to activities in the construction sector.  It includes select measuring devices, obtain measurements, perform simple calculations and clean-up.
Nominal Hours	48

<b>Elements</b>	<b>Performance Criteria</b> Bold italicized words are detailed in the Range of Variables
1. Select measuring devices	1.1. <b>PPE</b> (Personal protective equipment) and other safety devices are selected and used. 1.2. Work instructions are confirmed and applied. 1.3. <b>Materials</b> to be measured are identified and classified. 1.4. Appropriate <b>measuring devices</b> are selected based on materials. 1.5. Specifications are obtained from relevant <b>documents</b> . 1.6. Tolerance and clearance limits are identified and adjusted.
2. Obtain measurements	2.1. Accurate <b>measurements</b> are obtained using measuring devices. 2.2. Systems of measurements are identified and converted according to ISO standards. 2.3. Results are confirmed and recorded.
3. Perform simple calculations	3.1. Simple calculations involving <b>four basic operations</b> are carried out. 3.2. <b>Other operations</b> are used to complete tasks. 3.3. Appropriate formulas for calculating quantities of materials are selected. 3.4. <b>Calculations</b> are performed and verified for accuracy. 3.5. Material quantities are accurately calculated. 3.6. Results are interpreted and communicated to the authority.
4. Clean up	4.1. Measuring devices are cleaned, maintained

	and stored.
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### Ranges of Variables

Variables	Range (Include but are not limited to):
1. Materials	Refers to all construction materials included but not limited to the following: 1.1. Construction site support (Dogging, Rigging, etc.) 1.2. Carpentry and form works 1.3. Masonry, brick/block laying and concreting 1.4. Surface finishing, tiling and painting 1.5. Roofing 1.6. Plumbing 1.7. Residential electrical wiring and cabling
2. Measuring devices	2.1. Steel tape measure 2.2. Steel rule 2.3. Protractors 2.4. Calculator 2.5. Pen 2.6. Pencil 2.7. Eraser
3. PPE	3.1. Gloves 3.2. Safety shoes 3.3. Aprons
4. Documents	4.1. Technical manuals 4.2. Specifications 4.3. Sketches 4.4. Drawings
5. Measurements	5.1. Length 5.2. Width 5.3. Depth 5.4. Weight 5.5. Number 5.6. Diameter 5.7. Roundness 5.8. Angles 5.9. Flatness angle
6. Four basic operations	6.1. Addition 6.2. Subtraction

	6.3. Multiplication 6.4. Division
7. Other operations	7.1. Fractions 7.2. Percentages 7.3. Mixed numbers 7.4. Conversions 7.5. Scales 7.6. Trigonometric functions 7.7. Algebraic computations
8. Calculations	8.1. Area 8.2. Volume 8.3. Circumference 8.4. Clearance 8.5. Diameter 8.6. Scales 8.7. Ratio

### Evidence Guide

1. Critical aspects of competency	Assessment required evidence that the candidate: 1.1 Demonstrated knowledge in performing measurement and calculation according to job requirements. 1.2 Satisfied the requirements mentioned in the Performance Criteria and Range of Variables
2. Underpinning knowledge	2.1. Types of measuring devices 2.2. Measurement and calculation 2.3. Recording 2.4. Collection and storing materials. 2.5. Fraction and decimals 2.6. Linear measurement 2.7. Unit of conversion and conversion factors 2.8. Dimension 2.9. Ratio and proportion 2.10. Trigonometric function 2.11. Algebraic equation 2.12. Allowances and tolerances 2.13. Presentation of data and information

	<p>2.14. Tolerances</p> <p>2.15. Care in the use of measuring devices</p>
3. Underpinning skills	<p>3.1. Selecting measuring devices</p> <p>3.2. Obtaining measurements</p> <p>3.3. Performing calculations</p> <p>3.4. Cleaning up</p>
4. Underpinning attitudes	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Environmental concerns</p> <p>4.3 Eagerness to learn</p> <p>4.4 Tidiness and timeliness</p> <p>4.5 Respect for rights of peers and seniors in workplace</p> <p>4.6 Communication with peers and seniors in workplace</p>
5. Resource implications	<p>The following resources should be provided</p> <p>5.1 Suitable ventilated work area/shop with facilities and accessories</p> <p>5.2 Easy access and scope of measurement</p> <p>5.3 Availability of quality measuring and calculating devices</p> <p>5.4 Information on construction materials appropriate to the relevant construction field</p>
6. Methods of Assessment	<p>Competency in this unit should be assessed through:</p> <p>6.1 Direct observation.</p> <p>6.2 Oral test</p> <p>6.3 Demonstration</p> <p>6.4 Portfolio</p> <p>6.5 Written test</p>
7. Context for Assessment	<p>For certification competency should be assessed in the actual workplace or in a simulated workplace individually after completion of the module.</p>

### **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.

Unit of Competency	<b>Maintain tools and equipment</b>
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Unit Code	CON0204
Unit Descriptor	This unit covers the knowledge, skills, and attitude required to Maintain tools and equipment.  It includes check condition of tools and equipment, perform basic preventive maintenance and store tools and equipment.
Nominal Hours	30 hours

<b>Elements of Competency</b>	<b>Performance Criteria</b>
	Bold italicized words are detailed in the Range of Variables
1. Check condition of tools and equipment	1.1 <b><i>PPE</i></b> are selected and used. 1.2 <b><i>Materials, tools and equipment</i></b> are identified. 1.3 Non-functional tools and equipment are segregated and labeled. 1.4 Safety of tools and equipment are observed.
2. Perform basic preventive maintenance	2.1 Appropriate lubricants are identified. 2.2 Tools and equipment are lubricated. 2.3 Measuring instruments are checked and calibrated. 2.4 Defective instruments, equipment and accessories are inspected and replaced. 2.5 Tools are inspected, repaired and replaced after use. 2.6 Work place is cleaned and kept in safe state in line.
3. Store tools and equipment	3.1 Inventory of tools, instruments and equipment are conducted and recorded. 3.2 Tools and equipment are stored safely in appropriate locations.

### Range of Variables

<b>Variables</b>	<b>Range</b> (Included but not limited to):
1. Materials	1.1 Mobil oil 1.2 Grease 1.3 Kerosene oil 1.4 Waste cotton 1.5 Hand wash 1.6 Soap
2. Tools and equipment	2.1 Tools Cutting tools- hacksaw, crosscut saw, rip saw etc. Boring tools- auger, hand drill bit etc. Holding tools- combination pliers, C-clamp, bench vise etc. Hammering tools- ball-pin hammer, claw hammer, punch etc. 2.2 Measuring instruments/equipment
3. PPE	3.1 Goggles 3.2 Gloves 3.3 Safety shoes 3.4 Aprons
4. Forms	4.1 Maintenance schedule forms 4.2 Requisition slip 4.3 Inventory form 4.4 Inspection form 4.5 Procedures

### **Evidence Guide**

1. Critical aspects of competency	Assessment requires that the candidate: 1.1 Selected and used processes, tools and equipment to carry out task 1.2 Identified functional and non-functional tools and equipment 1.3 Checked lubricated and calibrated tools, equipment and instruments. 1.4 Replaced defective tools, equipment and their accessories 1.5 Observed and applied handling of tools and equipment and safety work practices 1.6 Prepared and submitted inventory report. 1.7 Maintained workplace in accordance with OSHA regulations 1.8 Stored tools and equipment safely in appropriate locations.
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2. Underpinning knowledge	<p>2.1 Safety Practices</p> <p>2.1.1 Use of PPE</p> <p>2.1.2 Handling of tools and equipment</p> <p>2.1.3 Good housekeeping</p> <p>2.2 Materials, tools and equipment</p> <p>2.2.1 Types and uses of lubricants</p> <p>2.2.2 Types and uses of cleaning materials</p> <p>2.2.3 Types and uses of measuring instruments and equipment</p> <p>2.3 Preventive maintenance</p> <p>2.3.1 Methods and techniques</p> <p>2.3.2 Procedures</p>
3. Underpinning skills	<p>3.1 Preparing maintenance materials, tools and equipment</p> <p>3.2 Proper handling of tools and equipment</p> <p>3.3 Performing preventive maintenance</p> <p>3.1 Applying instructions</p>
4. Underpinning attitude	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Environmental concerns</p> <p>4.3 Eagerness to learn</p> <p>4.4 Tidiness and timeliness</p> <p>4.5 Respect for rights of peers and seniors in workplace</p>
5. Resource implications	<p>The following resources should be provided:</p> <p>5.1 Workplace</p> <p>5.2 Maintenance schedule</p> <p>5.3 Maintenance materials, tools and equipment relevant to the proposed activity/task</p>
6. Methods of Assessment	<p>Competency in this unit should be assessed through:</p> <p>6.1 Direct observation.</p> <p>6.2 Oral test</p> <p>6.3 Demonstration</p> <p>6.4 Portfolio</p> <p>6.5 Written test</p>
7. Context for Assessment	<p>For certification competency should be assessed in the actual workplace or in a simulated workplace individually after completion of the</p>

	module.
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**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.

**Section-4. The Occupation Specific Competencies**

Unit of Competency	<b>Perform distempering</b>
Unit Code	CONPNT0205
Unit Descriptor	This unit covers the knowledge, skills and attitude required to perform distempering. It includes collect tools and equipment, prepare surface, apply base materials, perform distemper and clean the work place.
Nominal Hours	42

<b>Elements</b>	<b>Performance Criteria</b>
	Bold and Italicized terms are elaborated in the Range of Variables
1. Collect tools and equipment and materials	1.1 <b>Tools and equipment</b> are selected and collected. 1.2 Materials (Paints) are selected and collected.
2. Prepare surface	2.1 <b>PPE</b> are selected and used. 2.2 <b>Surface</b> is brushed thoroughly to make it free from mortar droppings. 2.3 Scales, grease, dirt are removed from an old surfaces. 2.4 Holes in plaster are filled in with plaster of Paris mixed with color. 2.5 Surface is rubbed down with fine grade sand paper to make it smooth. 2.6 Patched is applied before applying regular coat of distemper.
3. Apply base materials	3.1 Appropriate ratio of base <b>materials</b> are maintained 3.2 Base materials are prepared as requirement 3.3 Horizontal or vertical coating of mixed materials is applied on the working surface from top to the bottom or vice-versa. 3.4 After ensuring the dryness of first coating, second coating is applied to the working surface alternate way.
4. Perform distemper	4.1 Distemper materials are mixed with water as requirement. 4.2 Horizontal or vertical coating is thoroughly applied on the working surface from top to

	<p>the bottom carefully or vice-versa.</p> <p>4.3 Vertical or horizontal coating is then applied after the previous coating or surface is dried off properly or vice versa.</p> <p>4.4 Another coating should be applied up to get well finishing.</p> <p>4.4 Quality of distemper is checked and rectified as required.</p>
5. Clean work place	<p>5.1 Tools and equipment are cleaned.</p> <p>5.2 Work place is cleaned</p> <p>5.3 Waste materials are disposed in proper place</p>

### Range Of Variables

<b>Variables</b>	<b>Range</b> (Include but are not limited to):
1. Surface	<p>1.1 Plastered concrete surfaces</p> <p>1.2 Plastered masonry surfaces</p>
2. PPE	<p>2.1 Gloves</p> <p>2.2 Dust mask</p> <p>2.3 Safety shoes</p> <p>2.4 Hard hat</p> <p>2.5 Belt/body harness</p> <p>2.6 Goggles</p> <p>2.7 Working clothes</p> <p>2.8 Apron</p>
3.Tools and equipment	<p>3.1 Paint brushes</p> <p>3.2 Scraper</p> <p>3.3 Spatula</p> <p>3.4 Mixing stick</p> <p>3.5 Rags</p> <p>3.6 Putty Knife</p> <p>3.7 Lifeline and anchorage</p> <p>3.8 Roller brush</p> <p>3.9 Steel wire brush</p> <p>3.10 Sand paper (fine)</p> <p>3.11 Pumice stone 60-80 no</p>
4. Materials	<p>4.1 Chalk powder</p>

	<p>4.2 Water</p> <p>4.3 Gum</p> <p>4.4 Sealer</p> <p>4.5 Distemper</p>
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### Evidence Guide

1. Critical Aspects of Competency	<p>Assessment requires evidence that the learner:</p> <p>1.1 Interpreted instructions</p> <p>1.2 Maintained the proper ratio of materials</p> <p>1.3 Prepared base materials</p> <p>1.4 Applied first and second coating of distempers sequentially and perfectly</p>
2. Underpinning knowledge	<p>2.1 Interpreting specifications</p> <p>2.2 Safety and maintenance</p> <p>    2.2.1 Safety rules and regulations</p> <p>    2.2.2 Proper handling and care of tools and equipment</p> <p>2.3 Tools and equipment</p> <p>    2.3.1 Types of paint brushes or roller</p> <p>    2.3.2 Grades of stone</p> <p>    2.3.3 Types of sand paper</p> <p>2.4 Materials uses and specifications</p> <p>    2.4.1 Distemper</p> <p>    2.4.2 Sealer</p> <p>2.5 Methods and procedures of distemper</p>
3. Underpinning skills	<p>3.1 Following safety and maintenance procedures</p> <p>3.2 Preparing paint coat material</p> <p>3.3 Applying distemper materials</p> <p>3.4 Maintaining staging and storing of tools and equipment</p> <p>3.5 Preparing inspection and completion reports</p>
4. Underpinning attitudes	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Environmental concerns</p> <p>4.3 Eagerness to learn</p>

	<p>4.4 Tidiness and timeliness</p> <p>4.5 Respect for rights of peers and seniors in workplace</p> <p>4.5 Communication with peers and seniors in workplace</p>
5. Resource implications	<p>5.1 Adequate workplace</p> <p>5.2 Tools and equipment appropriate to distemper work</p> <p>5.3 Materials relevant to the proposed activity</p> <p>5.4 Plans and specifications relevant to the task</p> <p>5.5 Appropriate PPE</p>
6. Methods of Assessment	<p>Competency in this unit should be assessed through:</p> <p>6.1 Direct observation.</p> <p>6.2 Oral test</p> <p>6.3 Demonstration</p> <p>6.4 Written test</p> <p>6.5 Portfolio</p>
7. Context for Assessment	<p>For certification competency should be assessed in the actual workplace or in a simulated workplace individually after completion of the module.</p>
<p><b>Accreditation Requirements</b></p> <p>Training providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification.</p> <p>Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	



Unit of Competency	<b>Perform Aluminium painting</b>
Unit Code	CONPNT0206
Unit Descriptor	This unit covers the knowledge, skills and attitude required to perform aluminium painting. It includes inspect surface, collect tools and equipment and materials, make scaffolding, prepare metal surface, perform painting and clean the work place.
Nominal Hours	42

<b>Elements</b>	<b>Performance Criteria</b>
	Bold <i>italicized</i> words are detailed in the Range of Variables
1. Inspect surface	1.1 <b>PPE</b> are selected and used. 1.2 <b>Surfaces</b> are checked for moisture. 1.3 Surfaces are checked for defects and imperfection.
2. Collect tools and equipment and materials.	2.1 <b>Tools and equipment</b> are selected and collected. 2.2 Materials (Paints) are selected and collected.
3. Make scaffolding	3.1 <b>Scaffolding materials</b> are collected. 3.2 Scaffolding is made for upper position. 3.3 Safety precautions are practiced in using scaffolds.
4. Prepare metal surface	4.1 Rust and scales are removed by scraping or brushing with steel wire brushes. 4.2 Surfaces are made smooth with sand paper. 4.3 The surfaces are cleaned by cloth and all dust should be removed carefully. 4.4 Rust patches are cleaned completely with coarse emery paper and brush. 4.5 Grease marks, smoke are removed and the surfaces are washed and dried. 4.6. Old paint is removed completely. 4.7 Surfaces are coated with readymade paint of red lead.

5. Perform painting	<p>5.1 First coat of aluminium paint is applied horizontally or vertically or vice-versa by brush or spray machine from top to the bottom.</p> <p>5.2 Second coat is applied to the previous surface after the first coat is dried off alternate way.</p> <p>5.3. Another coat is applied up to get the desired color or good finishing.</p> <p>5.4 Quality of painting is checked and rectified as required.</p>
6. Clean work place	<p>6.1 Tools and equipment are cleaned.</p> <p>6.2 Work place is cleaned</p> <p>6.3 Waste materials are disposed in proper place</p>

### Range Of Variables

<b>Variables</b>	<b>Range</b> (Include but are not limited to):
1. PPE	<p>1.1 Gloves</p> <p>1.2 Safety shoes</p> <p>1.3 Hard Hat</p> <p>1.4 Respirator/Dust mask</p> <p>1.5 Goggles</p> <p>1.6 Apron</p>
2. Scaffolding	<p>2.1 Wood/ Bamboo/ Steel scaffolding</p> <p>2.2 7 feet and above high and 4 feet and above wide.</p>
3. Tools and equipment	<p>3.1 Paint brushes</p> <p>3.2 Sand paper</p> <p>3.3 Spatula</p> <p>3.4 Mixing stick</p> <p>3.5 Putty Knife</p> <p>3.6 Lifeline and anchorage</p> <p>3.7 Roller brush</p> <p>3.8 Spray/Mortar gun</p> <p>3.9 Air compressor</p> <p>3.10 Steel brush</p> <p>3.11 Emery cloth.</p> <p>3.12 Stone 60-80 no</p> <p>3.13 Rust converter</p>
4. Materials	<p>4.1 Red Oxide</p> <p>4.2 Sealer</p>

	4.3 Water 4.4 Aluminum paint
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### Evidence Guide

1. Critical aspects of competency	Assessment requires evidence that the learner: 1.1 Interpreted instructions 1.2 Applied first and second coating of aluminium painting sequentially and perfectly
2. Underpinning knowledge	2.1 Safety and maintenance 2.1.1 Safety rules and regulations 2.1.2 Proper handling and care of tools, materials and equipment 2.2 Tools and equipment 2.2.1 Sander (Pneumatic) 2.2.2 Compressor 2.2.3 Hand tools 2.3 Plans and specifications interpretation 2.3.1 Painting schedule 2.3.2 Architectural plans
3. Underpinning skills	3.1 Following safety and maintenance procedures 3.2 Preparing paint coat surface. 3.3 Applying paint procedure 3.4 Procedures for maintaining staging and storing of tools and equipment
4. Underpinning attitudes	4.1 Commitment to occupational health and safety 4.2 Environmental concerns 4.3 Eagerness to learn 4.4 Tidiness and timeliness 4.5 Respect for rights of peers and seniors in workplace 4.6 Communication with peers and seniors in workplace
5. Resource implications	5.1 Adequate workplace 5.2 Tools and equipment appropriate to aluminium work

	<p>5.3 Materials relevant to the proposed activity</p> <p>5.4 Plans and specifications relevant to the task</p> <p>5.5 Appropriate PPE</p>
6.Methods of assessment	<p>Competency in this unit should be assessed through:</p> <p>6.1 Direct observation.</p> <p>6.2 Oral test</p> <p>6.3 Demonstration</p> <p>6.4 Written test</p> <p>6.5 Portfolio</p>
7.Context for assessment	<p>For certification competency should be assessed in the actual workplace or in a simulated workplace individually after completion of the module.</p>

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Unit of Competency	<b>Perform plastic emulsion painting</b>
Unit Code	CONPNT0207
Unit Descriptor	This unit covers the knowledge, skills and attitude required to apply plastic emulsion paint .  It includes inspect surface, collect tools and equipment and materials, make scaffolding, prepare surface, perform painting and clean the work place.
Nominal Hours	48
<b>Elements</b>	<b>Performance Criteria</b> Bold <i>italicized</i> words are detailed in the Range of Variables
1. Inspect surface	1.1 <b>PPE</b> are selected and used. 1.2 <b>Surfaces</b> are checked for moisture. 1.3 Surfaces are checked for defects and imperfection.
2. Collect tools and equipment and materials.	2.1 <b>Tools and equipment</b> are selected and collected. 2.2 Materials (Paints) are selected and collected.
3. Make scaffolding	3.1 <b>Scaffolding materials</b> are collected. 3.2 Scaffolding is made for upper position. 3.3 Safety precautions are practiced in using scaffolds.
4. Prepare surface	4.1 Surfaces are made smooth with sand paper or pumic stone. 4.2 Surfaces are cleaned by cloth and all dust should be removed carefully. 4.3 Putty is applied to the spot or holes and plain the surface by scraper or sand paper. 4.4 Surface is washed with clean water. 4.5 Surface is allowed for dry
5. Perform painting	5.1 First coat of plastic emulsion paint is applied to the prepared surface horizontally or vertically or vice-versa by roller brush. 5.2 Second coat is applied to the previous surface after the first coat is dried off alternate ways 5.3. Another coat is applied up to get the desired color or good finishing. 5.4 Quality of painting is checked and rectified as required.
6. Clean work place	6.1 Tools and equipment are cleaned.

	6.2 Work place is cleaned 6.3 Waste materials are disposed in proper place
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### Range Of Variables

<b>Variables</b>	<b>Range (Include but are not limited to):</b>
1. Surface	1.1 Plastered concrete surface 1.2 Plastered masonry surface
2.PPE	2.1 Body harness/Safety belt 2.2 Gloves 2.3 Safety shoes 2.4 Hard Hat 2.5 Respirator/Dust mask 2.6 Goggles 2.7 Apron
3. Scaffolds	3.1 Wood/ Bamboo/ Steel scaffolding 3.2 7 feet and above high and 4 feet and above wide.
4. Tools, equipments	4.1 Scraper 4.2 Spatula 4.3 Mixing stick 4.4 Putty Knife 4.5 Lifeline and anchorage 4.6 Roller brush 4.7 Sand paper 120 no. 4.8 Stone 60-80 no
5. Materials	5.1 Base coat materials 5.2 Sealer 5.3 Plastic emulsion paint 5.4 Thinner

**Evidence Guide**

1. Critical aspects of competency	<p>Assessment requires evidence that the learner:</p> <p>1.1 Interpreted instructions.</p> <p>1.2 Applied first and second coating of plastic emulsion sequentially and perfectly</p>
2. Underpinning knowledge	<p>2.1 Safety and maintenance</p> <p>2.1.1 Safety rules and regulations</p> <p>2.1.2 Proper handling and care of tools, materials and equipment</p> <p>2.1.3 Paint technique</p> <p>2.1.4 Defect and troubleshooting of surface</p> <p>2.1.5 Scaffolding</p> <p>2.2 Trade mathematics and menstruation</p> <p>2.3 Tools and equipment</p> <p>2.3.1 Sander (Pneumatic)</p> <p>2.3.2 Stone</p> <p>2.3.3 Hand tools</p> <p>2.3.4 Types of roller</p> <p>2.5 Plans and specifications interpretation</p> <p>2.5.1 Painting schedule</p> <p>2.5.2 Architectural plans</p>
3. Underpinning skills	<p>3.1 Following safety maintenance procedures</p> <p>3.2 Staging/preparing scaffolds</p> <p>3.3 Applying menstruation</p> <p>3.4 Preparing surfaces for:</p> <p>3.4.1 Concrete</p> <p>3.4.2 Plaster surface</p> <p>3.5 Applying coating of painting</p> <p>3.6 Procedures for maintaining staging and storing of tools and equipment</p> <p>3.7 Maintaining company rules and regulations</p>
4. Underpinning attitudes	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Environmental concerns</p> <p>4.3 Eagerness to learn</p> <p>4.4 Tidiness and timeliness</p> <p>4.5 Respect for rights of peers and seniors in</p>

	workplace 4.6 Communication with peers and seniors in workplace
5. Resource implications	Things necessary to conduct assessment: 5.1 Workplace location 5.2 Tools and equipment appropriate to work processes. 5.3 Materials relevant to the proposed activity. 5.4 Working drawings, instructions and specifications relevant to the task. 5.5 Appropriate PPE
6. Methods of Assessment	Competency in this unit should be assessed through:  6.1 Direct observation. 6.2 Oral test 6.3 Demonstration 6.4 Written test 6.5 Portfolio
7. Context for Assessment	For certification competency should be assessed in the actual workplace or in a simulated workplace individually after completion of the module.

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Unit of Competency	<b>Perform weather coat painting</b>
Unit Code	CONPNT0208
Unit Descriptor	<p>This unit covers the knowledge, skills and attitude required to perform weather coat painting on outer plastered surface.</p> <p>It includes inspect surface, collect tools and equipment and materials, make scaffolding, prepare surface, perform painting and clean the work place.</p>
Nominal Hours	30
<b>Elements</b>	<b>Performance Criteria</b>
	Bold <i>italicized</i> words are detailed in the Range of Variables
1. Inspect surface	<p>1.1 <b>PPE</b> are selected and used.</p> <p>1.2 Surfaces are checked for moisture.</p> <p>1.3 <b>Surfaces</b> are checked for defects and imperfection.</p>
2. Collect tools and equipment and materials.	<p>2.1 <b>Tools and equipment</b> are selected and collected.</p> <p>2.2 Materials (Paint) are selected and collected.</p>
3. Make scaffolding	<p>3.1 <b>Scaffolding materials</b> are collected.</p> <p>3.2 Scaffolding is made for upper position.</p> <p>3.3 Safety precautions are practiced in using scaffolds.</p>
4. Prepare surface	<p>4.1 Surface is leveled by 60 no. stone for gaining the smooth surfaces.</p> <p>4.2 Surface is cleaned by water.</p> <p>4.3 Surface is allowed to dry.</p> <p>4.4 Prime coat is applied for holding putty.</p> <p>4.5 Spot Putty is applied to remove the defect where necessary.</p> <p>4.6 Surface is again plained by 120 no. sand paper.</p> <p>4.7 Under coat of weather paint is applied before perform painting.</p> <p>4.8 Seat putty is applied to fill-up final defects.</p>

5. Perform painting.	<p>5.1 First coat of weather coat is applied to the prepared surface horizontally or vertically by roller brush on the dried surface from top to the bottom.</p> <p>5.2 Second coat paint is applied by roller brush alternately way after the first coat is properly dried off.</p> <p>5.3 Finishing coat are applied to the previous dry coatings to get the required color and good finishing.</p> <p>5.4 Quality of painting is checked and rectified as required.</p>
6. Clean work place	<p>6.1 Tools and equipment are cleaned.</p> <p>6.2 Work place is cleaned</p> <p>6.3 Waste materials are disposed in proper place</p>

### Range Of Variables

<b>Variables</b>	<b>Range</b> (Include but are not limited to):
1. Surface	<p>1.1 Concrete surface</p> <p>1.2 Plaster surface</p>
2.PPE	<p>2.1 Body harness/Safety belt</p> <p>2.2 Gloves</p> <p>2.3 Safety shoes</p> <p>2.4 Hard Hat</p> <p>2.5 Respirator/Dust mask</p> <p>2.6 Goggle</p> <p>2.7 Apron</p>
3. Scaffolds	<p>3.1 Wood/ Bamboo/ Steel scaffolding</p> <p>3.2 7 feet and above high and 4 feet and above wide.</p>
4. Tools and equipments	<p>4.1 Scraper</p> <p>4.2 Spatula</p> <p>4.3 Mixing stick</p> <p>4.4 Putty Knife</p> <p>4.5 Lifeline and anchorage</p> <p>4.6 Roller brush or brush</p> <p>4.7 Pumice stone 60-80 no.</p>

	4.8 Sand paper
5. Materials	5.1 Sealer 5.2 Water 5.3 Weather coat paint

### Evidence Guide

1. Critical aspects of competency	Assessment requires evidence that the learner: 1.1 Interpreted instructions. 1.2 Applied first and second coding of weather coat sequentially and perfectly
2. Underpinning knowledge	2.1 Safety and maintenance 2.1.1 Safety rules and regulations 2.1.2 Proper handling and care of tools, materials and Equipment. 2.1.4 Paint procedure 2.1.5 Defects and troubleshooting 2.1.6 Scaffolding 2.2 Tools and equipment 2.2.1 Sander (Pneumatic) 2.2.2 Grade of stone 2.2.3 Hand tools 2.2.4 Types of roller brush 2.3 Plans and specifications interpretation 2.3.1 Painting schedule 2.3.2 Architectural plans
3. Underpinning skills	3.1 Application of paint 3.2 Following safety maintenance procedures 3.3 Staging/preparing scaffold 3.4 Applying menstruation 3.5 Preparing surfaces for: 3.5.1 Concrete 3.5.2 Plaster surface 3.6 Smoothing surfaces 3.7 Inspection and completion of report.

4. Underpinning attitudes	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Environmental concerns</p> <p>4.3 Eagerness to learn</p> <p>4.4 Tidiness and timeliness</p> <p>4.5 Respect for rights of peers and seniors in workplace</p> <p>4.6 Communication with peers and seniors in workplace</p>
5. Resource implications	<p>5.1 Workplace location</p> <p>5.2 Tools and equipment appropriate to work processes.</p> <p>5.3 Materials relevant to the proposed activity.</p> <p>5.4 Working drawings, instructions and specifications relevant to the task.</p> <p>5.5 Appropriate PPE</p>
6. Methods of Assessment	<p>Competency in this unit should be assessed through:</p> <p>6.1 Direct observation.</p> <p>6.2 Oral test</p> <p>6.3 Demonstration</p> <p>6.4 Written test</p> <p>6.5 Portfolio</p>
7. Context for Assessment	<p>For certification competency should be assessed in the actual workplace or in a simulated workplace individually after completion of the module.</p>

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Unit of Competency	<b>Perform synthetic enamel painting</b>
Unit Code	CONPNT0209
Unit descriptor	This unit covers the knowledge, skills and attitude required to perform synthetic enamel painting  It includes: inspect surface, collect tools and equipment and materials, make scaffolding, prepare wooden surface, prepare metal surface, perform painting and clean the work place.
Nominal hours	30

<b>Elements</b>	<b>Performance Criteria</b>
	Bold <i>italicized</i> words are detailed in the Range of Variables
1. Inspect surface	1.1 <b>PPE</b> are selected and used. 1.2 <b>Surfaces</b> are checked for moisture. 1.3 Surfaces are checked for defects and imperfection.
2. Collect tools and equipment and materials	2.1 <b>Tools and equipment</b> are selected and collected. 2.2 Materials (Paints) are selected and collected.
3. Make scaffolding	3.1 <b>Scaffolding materials</b> are collected. 3.2 Scaffolding is made for upper position. 3.3 Safety precautions are practiced in using scaffolds.
4. Prepare wooden surface	4.1 Surface of dust, mortar droppings and splashes of cement slurry are cleaned by scraper. 4.2 Wood work is dried and freed to be painted from moisture. 4.3 Smooth unevenness is rubbed down with sand paper. 4.4 Knots of wood are covered with putty of same color. 4.5 Prime coat is applied before painting wood work.
5 Prepare metal surface	5.1 Rust and scales of metal are removed by emery paper. 5.2 Surface of dust, mortar, dropping, rust are cleaned by scraper.

	5.3 Prime coat is applied on the clean surface before painting.
6. Perform painting	6.1 Painting are done evenly and smoothly with the help of painting brushes after surface preparation. 6.2 Each coat paint are done when previous coat is dried completely. 6.3 Synthetic enamel paint are continued up to get the required color or good finishing. 6.4 Quality of painting is checked and rectified as required
7. Clean work place	7.1 Tools and equipment are cleaned. 7.2 Work place is cleaned 7.3 Waste materials are disposed in proper place

### Range Of Variables

<b>Variables</b>	<b>Range</b> (Include but are not limited to):
1. Surfaces	1.1 Wood surface 1.2 Metal surface 1.3 Plastered surface
2. PPE	2.1 Gloves 2.2 Safety shoes 2.3 Hard Hat 2.4 Respirator/Dust mask 2.5 Goggles 2.6 Apron
3. Scaffolds	3.1 Wood/ Bamboo/ Steel scaffolding 3.2 7 feet and above high and 4 feet and above wide.
4. Tools and equipment	4.1 Scraper 4.2 Spatula 4.3 Mixing stick 4.4 Putty knife 4.5 Lifeline and anchorage 4.6 Hair brush 4.7 Sand paper 120 no. 4.8 Emery paper

	4.9 Rust converter for rusted surfaces 4.10 Spray gun
5. Putty	5.1 Wax putty 5.2 Chalk power putty
6. Materials	6.1 Base coat materials 6.2 Sealer 6.3 Synthetic Enamel Paint
7. Sand paper	7.1 Sand paper No. 80-120

### Evidence Guide

1. Critical aspects of competency	Assessment requires evidence that the learner: 1.1 Interpreted instructions. 1.2 Applied first and second coating of synthetic enamel painting sequentially.
2. Underpinning knowledge	2.1 Safety and maintenance 2.1.1 Safety rules and regulations 2.1.2 Proper handling and care of tools, materials and equipment 2.1.3 Paint procedure 2.1.4 Identify defects. 2.1.5 Putting 2.1.6 Scaffolding 2.2 Tools and equipment 2.2.1 Sander (Pneumatic) 2.2.2 Emery paper 2.2.3 Hand tools 2.2.4 Compressor 2.3 Plans and specifications interpretation 2.3.1 Painting Schedule 2.3.2 Architectural plans
3. Underpinning skills	3.1 Applying paint procedure 3.2 Following safety maintenance procedures 3.3 Applying menstruation 3.4 Preparing surfaces 3.5 Smoothing surfaces

	3.7 Inspection and completion reports.
4. Underpinning attitudes	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Environmental concerns</p> <p>4.3 Eagerness to learn</p> <p>4.4 Tidiness and timeliness</p> <p>6.6 Respect for rights of peers and seniors in workplace</p> <p>4.6 Communication with peers and seniors in workplace</p>
5. Resource implications	<p>5.1 Workplace location</p> <p>5.2 Tools and equipment appropriate to work processes.</p> <p>5.3 Materials relevant to the proposed activity.</p> <p>5.4 Working drawings, instructions and specifications relevant to the task.</p> <p>5.5 Appropriate PPE</p>
6. Methods of Assessment	<p>Competency in this unit should be assessed through:</p> <p>6.1 Direct observation.</p> <p>6.2 Oral test</p> <p>6.3 Demonstration</p> <p>6.4 Written test</p> <p>6.5 Portfolio</p>
7. Context for Assessment	For certification competency should be assessed in the actual workplace or in a simulated workplace individually after completion of the module.

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## Annexes

### Annex 1. Competency map for painter in Construction sector

OCCUPATION SPECIFIC COMPETENCIES	Prepare tools, equipment and materials for painting	Prepare surface for white washing	Perform white washing	Perform color washing	Perform Distempering	Perform aluminium painting
	1	1	1	1	1	2
SECTOR SPECIFIC COMPETENCIES	Perform plastic emulsion painting	Perform weather coat painting	Perform synthetic enamel painting	Perform cement painting	Perform spray painting	Perform varnishing
	2	2	2	3	3	3
GENERIC COMPETENCIES	Perform French polishing	Perform Estimate for painting				
	3	3				
SECTOR SPECIFIC COMPETENCIES	Work in the construction sector	Interpret Drawings and Specifications in the Painting Manuals	Use Hand Tools and Power Tools for the Painting	Perform Measurement & Calculations in painting	Maintain tools and equipment	
	1	1	1	2	2	
GENERIC COMPETENCIES	Communicate in the workplace	Work in a team environment	Practice workplace cleanliness	Practice occupational health & safety	Lead small team	Demonstrate work values
	1	1	1	1	3	3
	Practice negotiation skills					
	3					

## Annex-2. Bangladesh National Qualifications Framework

TVQF Level	Education Type			Current Qualification Structure	Job Classification
	Pre-Voc	VE	TE		
<b>TVQF 6</b>			Diploma	4-year Diploma	Supervisor/Middle Manager/Sub-Assistant Engineer
<b>TVQF 5</b>		**NSC-V		NSS Master	Highly-Skilled Worker/Supervisor
<b>TVQF 4</b>		**NSC-IV		NSS 1/HSC (Voc) Year 11/12	Skilled Worker
<b>TVQF 3</b>		**NSC-III		NSS 2/SSC (Voc) Year 10	Semi-Skilled Worker
<b>TVQF 2</b>		**NSC-II		NSS 3/SSC (Voc) Year 9	Basic Skilled Worker
<b>TVQF 1</b>		**NSC-I		NSS Basic/ Basic Trade Course	Basic Worker
<b>Pre-Voc 2</b>	*NPVC-II			None	Pre-Vocational Trainee
<b>Pre-Voc 1</b>	*NPVC-I			None	Pre-Vocational Trainee

\*NPVC – National Pre-Vocational Certificate

\*\*NSC – National Skill Certificate

**Annex-3. Qualification Level Descriptors**

<b>BTVQF Level</b>	<b>Knowledge</b>	<b>Skill</b>	<b>Responsibility</b>	<b>Job Class</b>
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	Manage 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 Engineer
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 (NSC 4)
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	Medium 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 Skilled Worker

BTVQF Level	Knowledge	Skill	Responsibility	Job Class
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 (NPVC 2)
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 (NPVC 1)

#### Annex 4. Key for coding

Code Description

Occupational Sector

RMG Ready-Made Garments

LEG Light Engineering

CON Construction

INF Informal Sector

Competencies

GN Generic Competencies

SSC Sector Specific Competency

OSC Occupation Specific Competency

Occupation

MAS Mason

PLM Plumbing

PNT Painter

## **Acknowledgments**

The Bangladesh Technical Education Board (BTEB) wishes to extend heartfelt thanks and appreciation to the business and industry, academic community and other government agencies who shared their precious time and expertise to the conceptualization, development, validation and finalization of this National Competency Standards.

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