

BANGLADESH TECHNICAL EDUCATION BOARD



NATIONAL COMPETENCY STANDARDS
For
Tile work: Pre-voc 2
Construction Sector Industry Skills Council
Bangladesh

BANGLADESH TECHNICAL EDUCATION BOARD
June, 2013

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For
Tile work: Pre-voc 2
Structure of competency

Sl. No.	Unit Code and Title		UoC Level	Nominal Duration (Hours)
Generic – Compulsory (4 UoCs required)				180
1	GNPV2001A1	Apply Basic Mathematics	PV-2	40
2	GNPV2002A1	Apply Occupational Safety and Health (OSH) in the Workplace	PV-2	20
3	GNPV2003A1	Apply Basic English	PV-2	60
4	GNPV2004A1	Apply Basic Bangla	PV-2	60
Sector Specific – Compulsory (1 UoC required)				30
5	CONPV2001A1	Use hand, measuring and power tools. *	PV-2	30
Occupation Specific – Compulsory (3 UoCs required)				150
6	TWPV2001A1	Prepare surface for tile work.*	PV-2	30
7	TWPV2002A1	Perform floor tile work. *	PV-2	60
8	TWPV2003A1	Perform wall tile work. *	PV-2	60
Total Hours				360

* Transacted from NTVQF 1

GENERIC UNITS
(Pre-vocational Qualification Level-2)

National Technical and Vocational Qualification Framework for Bangladesh
Title work: Pre-voc 2
Unit of Competency

Unit Code and Title	GNPV2001A1: Apply basic mathematics.
Nominal Hours	40 Hours
Unit Descriptor	This unit of competency requires the knowledge, skills and attitude to apply mathematical method such as addition, subtraction, multiplication and division to measure and find out dimension of object in the workplace.
Elements of Competency	Performance Criteria <i>Italicized terms are elaborated in the range of variables</i>
1. Read and write numeric numbers in Bangla and English.	1.1. Numerical numbers from 0 to 9 in Bangla and English is recognized. 1.2. Arrangement in ascending and descending order of numbers in English and Bangla is demonstrated. 1.3. Reading and writing of numerical numbers in Bangla and English are demonstrated.
2. Use mathematical methods.	2.1. <i>Addition, subtraction, multiplication and division</i> are applied. 2.2. Addition of numbers is carried out. 2.3. Subtraction of numbers from other numbers is demonstrated. 2.4. Multiplication of numbers with other numbers is demonstrated. 2.5. Division of numbers by other numbers is carried out. 2.3. Addition, subtraction, multiplication and division In decimal system are solved. 2.4. Percentage of numbers is calculated.
3. Measure in Metric system.	3.1. Units of measurement of length, breadth, height, weight and thickness in metric system is used. 3.2. Measurement of area and volume of solid and liquid in metric system is carried out. 3.3. Measurement of time is applied.
4. Measure in British system.	4.1. Units of measurement of length, breadth, height, weight and thickness in British system are used. 4.2. Measurement of area and volume of solid and liquid in British system is carried out. 4.3. Measurement of time is applied.
Range of Variables	
Variable	Range (<i>may include but not limited to:</i>)
<i>1. Mathematical methods of Addition, subtraction, multiplication and division</i>	1.1. Addition up to six digits is applied. 1.2. Subtraction up to six digits is applied. 1.3. Multiplication up to six digits is applied. 1.4. Division up to six digits is applied. 1.5. Calculation of percentage. 1.6. Calculation of area and volume.
Evidence Guide	

The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirement of the current version of the Unit of Competency.	
1. Critical aspect of competency.	1.1. Calculation using addition, subtraction, multiplication and division. 1.2 Measurement of area and volume.
2. Underpinning knowledge.	2.1. Calculation requirements in the workplace. 2.2. Selection of appropriate mathematical methods. 2.3. Use of tools and equipment. 2.4. Symbols and terminology. 2.5. Use of units.
3. Underpinning skill.	3.1. Identification of appropriate mathematical methods from workplace information. 3.2. Selection of workplace information (Charts, tables, equipment, manuals). 3.3. Application of required skills in the workplace.
4. Required attitude.	4.1. Commitment to occupational safety and health. 4.2. Promptness in carrying out activities. 4.3. Tidiness and timeliness. 4.4. Respect for rights of peers, sub-ordinates and seniors in workplace. 4.5. Sincere and honest to the duties. 4.6. Eagerness to learn. 4.7. Communication with peers, sub-ordinates and seniors in the workplace.
5. Resource implication.	The following resources must be provided. 5.1. Calculator. 5.2. Measuring tape. 5.3. Ruler. 5.4. Marking chalk. 5.5. Ball pen. 5.6. Pencil. 5.7. Marker pen. 5.8. White board. 5.9. Flip charts. Tools, equipment and physical facilities. 5.10. Materials and consumables.
6. Assessment methods.	Assessment methods may includes but not limited to. 6.1. Demonstration 6.2. Oral question 6.3. Witten test
7. Context of assessment.	Competency may be assessed in the workplace or in a simulated workplace.
<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 requirement set by BTEB.</p>	

National Technical and Vocational Qualification Framework for Bangladesh

Title work: Pre-voc 2 Unit of Competency

Unit Code and Title	GNPV2002A1: Apply Occupational Safety & Health (OSH) Practice in the workplace.
Nominal Hours	20 Hours
Unit Descriptor	This unit of competency requires the knowledge, skills and attitude to apply Occupational Safety & Health (OSH) practice in the workplace.
Elements of Competency	Performance Criteria <i>Italicized terms are elaborated in the range of variables</i>
1. Follow occupation safety and health environment at workplace.	1.1. <i>PPE</i> is selected and worn as per requirement. 1.2. <i>Hazardous at workplace</i> explained. 1.3. Unsafe tools at workplace are listed. 1.4. Flammable materials are recognized. 1.5. Access and storable materials are preserved in designated place. 1.6. <i>OSH materials, resources</i> and equipment are used safely according to specifications, legislation and standard operating procedures.
2. Perform work in safe condition.	2.1. Safe OSH practices are performed. 2.2. Appropriate personal protective equipment (PPE) are used. 2.3. Safety signs, symbols and banners are displayed. 2.4. Location of the fire fighters is identified. 2.5. Clear and free emergency exit passage maintained.
3. Use first aid kits.	3.1. Contents in the <i>first aid kit</i> are selected. 3.2. First aid kit in emergency is used.
4. Maintain healthy and hygiene workplace.	4.1. Aspect of good housekeeping is explained. 4.2. Washing procedure of hands and parts of body is used. 4.3. Useable cleaning agents at workplace is selected. 4.5. Safe drinking water is made available.

Range of Variables	
Variable	Range(<i>may include but not limited to:</i>)
1. Hazardous workplace.	1.1. Accumulation of waste materials. 1.2. Random storage of tools, equipment and furniture. 1.3. Storage of rejected wires, cables and structural materials. 1.4. Storage of flammable materials. 1.5. Congested emergency exit. 1.6. Oil splits floor, passage at workplace.

<p>2. OSH materials and resources.</p>	<p>2.1. Hand gloves. 2.2. Mask. 2.3. Apron. 2.4. Cap. 2.5. Goggle. 2.6. Safety shoes. 2.7. Cautionary signs, symbols and banners to be displayed. 2.8. Evacuation program. 2.9. Fire extinguisher. 2.10. Emergency lights, signals. 2.11. Instructions. 2.12. Stretcher.</p>
<p>3. First aids kit.</p>	<p>3.1. Sterilized cotton. 3.2. Bandage. 3.3. Scissors. 3.4. Washing agent for injury. 3.5. Medicine for burn. 3.6. Medicine for sudden head-ache.</p>
<p>Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirement of the current version of the Unit of Competency.</p>	
<p>1. Critical aspect of competency.</p>	<p>1.1. Use of appropriate OSH materials and equipment. 1.2. Handling of OSH materials and equipment. 1.3. Use of appropriate assessing method. 1.4. Use of appropriate delivery method.</p>
<p>2. Underpinning knowledge.</p>	<p>2.1. Maintenance of good OSH condition in workplace. 2.2. Use of symbols. 2.2. Evacuation instructions with pictures and words 2.3. Planning of floor layout of workplace. 2.4. Elimination of hazardous condition. 2.5. Use of PPE.</p>
<p>3. Underpinning skill.</p>	<p>3.1. Use of appropriate PPE. 3.2. Preparation of signs and banners. 3.4. Displaying of signs and banners.</p>
<p>4. Required attitude.</p>	<p>4.1. Commitment to occupational safety and health. 4.2. Promptness in carrying out activities. 4.3. Tidiness and timeliness. 4.4. Respect for rights of peers, sub-ordinates and seniors in workplace. 4.5. Sincere and honest to the duties. 4.6. Eagerness to learn. 4.7. Communication with peers, sub-ordinates and seniors in the workplace.</p>
<p>5. Resource implication.</p>	<p>The following resources must be provided. 5.1. Drawing paper. 5.2. Drawing templates. 5.3. First aid kit with required contents. 5.4. PPE 5.5. Pen, pencil, marker Pen and eraser. 5.6. Banners showing OSH practice.</p>
<p>6. Methods of assessment.</p>	<p>Methods of assessment include but not limited to: 6.1. Oral questions.</p>

	6.2. Demonstration. 6.3. Written test.
7. Context of assessment.	Competency may be assessed in the workplace or in a simulated workplace.
<p>Accreditation Requirements</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 requirement set by BTEB.</p>	

National Technical and Vocational Qualification Framework for Bangladesh
Title work: Pre-voc 2
Unit of Competency

Unit Code and Title	GNPV2003A1: Apply Basic English.
Nominal Hours	60 Hours
Unit Descriptor	This unit of competency requires the knowledge, skills and attitude to read, write, speak and communicate in English in the workplace.
Elements of Competency	Performance Criteria <i>Italicized terms are elaborated in the range of variables</i>
1. Recognize the alphabets in English.	1.1. Alphabets in English are recognized. 1.2. Reading and writing words in English are carried out. 1.3. Reading and writing of technical terms are performed..
2. Read and write workplace information in English.	2.1. Reading of safety signals, banners, nameplates are demonstrated. 2.2. Writing visual information is demonstrated. 2.3. Learning aids are used.
3. Introduce yourself in English to others.	3.1. Introductory conversation in English is demonstrated. 3.2. Self introduction to other in English is performed. 3.3. Reading and writing of nameplates on equipment, materials in the workplace are demonstrated. 3.4. Reading English text is performed. 3.5. Vocabulary practice are performed.
Range of Variables	
Variable	Range(may include but not limited to:)
1. Learning aids.	1.1. Books / booklets with pictures with names written in English. 1.2. Work sheets / ID cards. 1.3. Catalogues / Manuals. 1.4. White boards / Marker pens. 1.5. Chalk boards / Chalk. 1.6. OSH information banner. 1.7. Pen / Pencil. 1.8. Flip charts. 1.9. Cassettes player / recorder. 1.10. Cassettes recorded in English conversations. 1.11. Lessons in English conversations. 1.12. TV and monitor. 1.13. Multimedia.
2. Visual information.	2.1. Signs. 2.2. Banners. 2.3. Forms. 2.4. Charts. 2.5. Labels. 2.6. Photo graphs captions. 2.7. Catalogues. 2.8. Cartoons. 2.9. News paper. 2.10. Name plate
3. Vocabulary practice.	3.1. Conversation in English between two learners. 3.2. Group conversation. 3.3. Reading.

	3.4. Singing. 3.5. Listening and reproducing.
Evidence Guide	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirement of the current version of the Unit of Competency.	
1. Critical aspect of competency.	1.1. Reading and writing words in English are carried out. 1.2. Reading and writing of technical terms are performed.
2. Underpinning knowledge.	2.1. Reading of alphabets in English. 2.2. Pronunciation of English words. 2.3. Reading workplace information in English. 2.4. Reading words and sentences in English. 2.5. Structures of words and sentences in English. 2.6. Reading of words in English related to occupation.
3. Underpinning skill.	3.1. Writing of alphabets in English. 3.2. Writing words and sentences in English. 3.3. Writing workplace information in English. 3.4. Writing words and sentences in English related to occupation.
4. Required attitude.	4.1. Communication with peers, sub-ordinates and seniors in the workplace. 4.2. Commitment to occupational safety and health. 4.3. Promptness in carrying out activities. 4.4. Tidiness and timeliness. 4.5. Respect for rights of peers, sub-ordinate and seniors in workplace. 4.6. Sincere and honest to the duties. 4.7. Eagerness to learn.
5. Resource implication.	The learning aids and other required materials must be provided to learn English.
6. Methods of assessment.	Method of assessment may includes but not limited to. 6.1. Oral questions. 6.2. Written test. 6.3. Reading test 6.4. Speaking test.
7. Context of assessment.	Competency may be assessed in the workplace or in a simulated workplace.
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.	
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National Technical and Vocational Qualification Framework for Bangladesh
Title work: Pre-voc 2
Unit of Competency

Unit Code and Title	GNPV2004A1: Apply Basic Bangla.
Nominal Hours	60 Hours
Unit Descriptor	This unit of competency requires the knowledge, skills and attitude to read, write, speak and communicate in Bangla in the workplace.
Elements of Competency	Performance Criteria <i>Italicized terms are elaborated in the range of variables</i>
1. Recognize the alphabets in Bangla.	1.1. Alphabets in Bangla are recognized. 1.2. Reading and writing words in Bangla are carried out. 1.3. Reading and writing of technical terms are performed.
2. Read and write workplace information in Bangla.	2.1. Reading of safety signals, banners, nameplates are demonstrated. 2.2. Writing of visual information are demonstrated. 2.3 Learning aids are used.
3. Introduce yourself in Bangla to others.	3.1. Self introduction to others in Bangla is performed. 3.2. Reading and writing of nameplates on equipment, materials in the workplace are demonstrated. 3.3. Reading Bangla text is performed. 3.4. Vocabulary practices are performed.
Range of Variables	
Variable	Range(<i>may include but not limited to:</i>)
1. Learning aids.	1.1. Books / booklets with pictures with names written in Bangla. 1.2. Work sheets / ID cards. 1.3. Catalogues / Manuals. 1.4. White boards / Marker pens. 1.5. Chalk boards / Chalk. 1.6. OSH information banner. 1.7. Pen/ Pencil. 1.8. Flip charts. 1.9. Cassettes player / recorder. 1.10. Cassettes recorded in Bangla conversations. 1.11. Lessons in Bangla conversations. 1.12. TV and monitor. 1.13. Multimedia.
2. Visual information.	2.1. Banner. 2.2. Form. 2.3. Chart. 2.4. Label. 2.5. Photo graphs captions. 2.6. Catalogues. 2.7. News papers.
3. Vocabulary practice.	3.1. Conversation in Bangla between two learners. 3.2. Conversation In Bangla in groups. 3.3. Reading 3.4. Singing in Bangla. 3.5. Listening and reproducing.
Evidence Guide	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the	

requirement of the current version of the Unit of Competency.	
1. Critical aspect of competency	1.1. Reading and writing words in Bangla are carried out. 1.2. Reading and writing of technical terms are performed.
2. Underpinning knowledge.	2.1. Reading of alphabets in bangla. 2.2. Pronunciation of Bangla words. 2.3. Reading workplace information in Bangla. 2.4. Reading words and sentences in Bangla. 2.5. Structures of words and sentences in Bangla. 2.6. Reading of words in Bangla related to occupation.
3. Underpinning skill.	3.1. Writing of alphabets in Bangla. 3.2. Writing words and sentences in Bangla. 3.3. Writing workplace information in Bangla. 3.4. Writing words and sentences in Bangla related to occupation.
4. Required attitude.	4.1. Communication in workplace. 4.2. Commitment to occupational safety and health. 4.3. Promptness in carrying out activities. 4.4. Tidiness and timeliness. 4.5. Respect for rights of peers, sub-ordinates and seniors in workplace. 4.6. Sincere and honest to the duties. 4.7. Eagerness to learn.
5. Resource implication.	5.1. The learning aids and other required materials must be provided to learn Bangla.
6. Methods of assessment.	Methods of assessment may include but not limited to. 6.1. Continuous assessment. 6.2. Oral questions. 6.3. Assignment. 6.4. Written test. 6.5. Reading test 6.6. Speaking test.
7. Context of assessment.	Competency may be assessed in the workplace or in a simulated workplace.
<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.</p> <p>Accredited providers assessing against this unit of competency must meet the quality assurance requirement set by BTEB.</p>	

SECTOR SPECIFIC UNITS
(Pre-vocational Qualification Level-2)

National Technical and Vocational Qualification Framework for Bangladesh
Title work: Pre-voc 2
Unit of Competency

Unit Code and Title	CONPV2001A1 : Use hand, measuring and power tools.
Nominal Hours	30 Hours
Unit Descriptor	This unit of competency require the skills, knowledge and attitude to Use hand, measuring, power tools and calculations in the building construction sector at the work place.
Elements of Competency	Performance Criteria
1. Select tools.	1.1. Hand, measuring and power tools are selected as per requirement. 1.2. Hand-eye coordination is applied in the use of tools. 1.3. Unsafe or faulty tools are identified and marked for repair. 1.4. Sources of power supply for power tools are recognized.
2. Take measurements.	2.1. Select measuring tools to obtained measurements as per requirement. 2.2. Systems of measurements are identified. 2.3. Results are recorded.
3. Perform preventive maintenance.	3.1. PPE is selected and worn as per requirement. 3.2. Applications of tools are recognized. 3.3. Tools and equipment are cleaned according to workplace instructions. 3.4. Lubricants are identified according to types of tools. 3.5. Tools are lubricated according to instructions . 3.6. Measuring tools are checked and calibrated. 3.7. Defective hand, measuring and power tools are inspected, corrected and replaced. 3.8. Tools are inspected, repaired and replaced after use.
4. Clean and store.	4.1. Inventory of hand, measuring and power tools are conducted and recorded as per stock register by using forms . 4.2. Tools are cleaned and stored safely. 4.3. Workplace is cleaned and cleared of debris and unwanted materials.
Range of Variables	
Variable	Range (may include but not limited to):
1. Applications	1.1. Adjusting 1.2. Aligning 1.3. Assembling 1.4. Boring 1.5. Clamping 1.6. Cleaning 1.7. Cutting 1.8. Dismantling 1.9. Finishing 1.10. Hand sharpening 1.11. Lubricating

	<ul style="list-style-type: none"> 1.12. Scraping 1.13. Simple Tool Repairs 1.14. Threading 1.15. Tightening
2. Hand tools	<ul style="list-style-type: none"> 2.1. Adjustable spanners 2.2. Auger bits 2.3. Bars (crow and pitch) 2.4. Bench vice 2.5. Bolt cutters 2.6. Brace 2.7. C-clamp 2.8. Chisels 2.9. Crosscut saw 2.10. Die and stock 2.11. Drill bits 2.12. Files 2.13. Gouges 2.14. Grin let 2.15. Hacksaw 2.16. Hammers 2.17. Hand drill 2.18. Hand saws 2.19. Measuring Tape 2.20. Nips 2.21. Paint Brushes/Rollers 2.22. Picks/Mattocks 2.23. Pliers 2.24. Plumb bob 2.25. Punches 2.26. Rip saw 2.27. Scarpers 2.28. Screwdrivers 2.29. Sealant Gun 2.30. Shovel/Spades 2.31. Sledge Hammers 2.32. Sockets 2.33. Spanners and Wrenches 2.34. Spatula/Putty Knives 2.35. Steel tape 2.36. String Lines 2.37. Taps 2.38. Triangle 2.39. Trowels and Floats 2.40. Try square 2.41. Vice grip 2.42. Wire Cutters 2.43. Wood Planes 2.44. spirit level 2.45. steel trowel 2.46. Jointer trowel 2.47. Aluminium float roll 2.48. Wooden float roll 2.49. Masonry tray 2.50. Brick cutting hammer
3. Measuring tools.	<ul style="list-style-type: none"> 3.1. Set squares

	<ul style="list-style-type: none"> 3.2. Dial indicators 3.3. Micrometres 3.4. Slide callipers 3.5. Steel tape 3.6. Triangle 3.7. Steel rule 3.8. Carpenter's square 3.9. Calculator 3.10. Vernier caliper 3.11. Feeler gauges 3.12. Thermometers 3.13. protractors
4. Power Tools	<ul style="list-style-type: none"> 4.1. Drills 4.2. Nail guns 4.3. Staplers 4.4. Screw Drivers 4.5. Angle Grinders 4.6. Pneumatic wrenches 4.7. Circular saw 4.8. Grinders 4.9. Jigsaws 4.10. Nibblers 4.11. Cutting saw 4.12. Threading machine 4.13. Sanders 4.14. Planers 4.15. Routers 4.16. Pedestal drills 4.17. Pedestal grinders 4.18. Tiles cutting pen 4.19. Tiles cutting machine 4.20. Concrete mixture machine 4.21. Vibrator machine
5. Instructions	<ul style="list-style-type: none"> 5.1. Manufacturer's Specifications and Instructions for specific tools. 5.2. Workplace orders and instructions. 5.3. Work schedule documentation. 5.4. Procedures.
6. PPE	<ul style="list-style-type: none"> 6.1. Mask 6.2. Safety goggles 6.4. Safety shoes 6.5. Aprons
7. Forms	<ul style="list-style-type: none"> 7.1. Maintenance schedule forms 7.2. Requisition slip 7.3. Inventory Form 7.4. Inspection Forms 7.5. Procedures
<p>Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.</p>	
1. Critical aspects of competency.	<ul style="list-style-type: none"> 1.1. Selection and use of hand, measuring and power tools. 1.2. Perform routine maintenance and storage of hand

	measuring and power tools.
2. Underpinning knowledge.	2.1. Proper selection of hand, measuring and power tools. 2.2. Specification, types and use of hand, measuring and power tools. 2.3. Principles and techniques in maintenance and care.
3. Underpinning skills.	3.1. Handling of tools. 3.2. Repairing of defects hand, measuring and power tools. 3.3. Applications of tools.
4. Required attitude.	4.1. Commitment to occupational safety and health. 4.2. Communication with peers, sub-ordinates and seniors in workplace. 4.3. Promptness in carrying out activities. 4.4. Tidiness and timeliness. 4.5. Respect of peers, sub-ordinates and seniors in workplace. 4.6. Environmental concern. 4.7. Sincere and honest to duties.
5. Resource implication.	Tools, equipment and physical facilities appropriate to perform activities.
6. Methods of assessment.	Methods of assessment may include but not limited to: 6.1. Demonstration 6.2. Written test 6.3. Oral questions
7. Context of assessment.	Competencies may be assessed in the work place or in a simulated work place
<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.</p>	

OCCUPATION SPECIFIC UNIT

National Technical and Vocational Qualification Framework for Bangladesh
Tile work: Pre-voc 2
Unit of Competency

Unit Code and Title	TWPV2001A1: Prepare surfaces for tile work.
Nominal Hours	40 Hours
Unit Descriptor	This unit of competency requires the knowledge, skills and attitude to prepare surfaces for tile work. It includes Planning of works, preparation of materials and substrates for the tiles fixing process.
Element of Competency	Performance Criteria <i>Italianized items are elaborated in the range of variable</i>
1. Plan and prepare work.	1.1. Work instructions and operational details are obtained using relevant information , confirmed and applied for planning and preparation purposes. 1.2. PPE is selected and worn as per requirement. 1.3. Barricade requirements are implemented. 1.4. Tools and equipment are selected. 1.5. Materials are checked in accordance with plan and specifications and quality requirements .
2. Prepare underlay and sheeting substrate.	2.1. Underlay preparation is provided as provided as per requirement. 2.2. Substrate surface is finished to approve surface standards with joints, flush and sealed.
3. Preparer substrate surface.	3.1. Surface-mounted construction units and attachments are safely detached and removed from work area. 3.2. Surfaces are levelled and cleaned in accordance with job requirements. 3.3. Materials for splash coat are proportioned and mixed. 3.4. Horizontal and vertical surrounds are prepared for tiling process in accordance with type of tile and specified finish. 3.5. Materials for coat are proportioned and mixed. 3.6. Surfaces are scratched, cured and dried.
5. Perform plaster.	5.1. Plastering materials, tools and equipment are collected. 5.2. Plastering area is selected and prepared. 5.3. Mortar is prepared as per requirement. 5.4. Plastering on wall and floor as per work standard.
6. Clean and store.	6.1. Workplace is cleared and materials disposed of, reused or recycled. 6.2. Tools and equipment are cleaned, checked, maintained and stored.
Range of Variables	
Variable	Range (may include but not limited to):
1. Information	1.1. Diagrams or sketches. 1.2. Instructions issued by authorized officials. 1.3. Manufacturer specifications and instructions. 1.4. Regulatory and legislative requirements pertaining to preparing surfaces for tiling.

	<p>1.5. Relevant standards.</p> <p>1.6. Safe work procedures relating to preparing surfaces for tiling.</p> <p>1.7. Signage.</p> <p>1.8. Verbal, written and graphical instructions.</p> <p>1.9. Work bulletins.</p> <p>1.10. Work schedules plans and specifications.</p>
2. Planning and preparation	<p>2.1. Assessment of conditions and hazards.</p> <p>2.2. Determination of work requirements and safety plans and policies.</p> <p>2.3. Equipment defect identification.</p> <p>2.4. Work site inspection.</p>
3. PPE	<p>3.1. Musk.</p> <p>3.2. Safety shoes.</p> <p>3.3. Safety goggles.</p> <p>3.4. Apron.</p> <p>3.5. Cap.</p> <p>3.6. Helmet.</p>
4. Tools and equipment	<p>4.1. Brooms</p> <p>4.2. Brushes</p> <p>4.3. Buckets</p> <p>4.4. Caulking guns</p> <p>4.5. Cement sheet cutters</p> <p>4.6. Concrete mixers</p> <p>4.7. Electrical leads</p> <p>4.8. Hammers</p> <p>4.9. Hose and water sprays</p> <p>4.10. Ladders</p> <p>4.11. Levelling equipment</p> <p>4.12. Lump hammers</p> <p>4.13. Measuring tapes and rules</p> <p>4.14. Mortar boards</p> <p>4.15. Nippers</p> <p>4.16. Pointed grouters</p> <p>4.17. Power drills and screwdrivers</p> <p>4.18. Power grinders and sanders</p> <p>4.19. Rags</p> <p>4.20. Rubber mallets</p> <p>4.21. Sanding blocks</p> <p>4.22. Saws</p> <p>4.23. Scrapers</p> <p>4.24. Shovels</p> <p>4.25. Spacers and wedges</p> <p>4.26. Spatulas</p> <p>4.27. Sponges</p> <p>4.28. Squares</p> <p>4.29. Squeegees</p> <p>4.30. Straight edges</p> <p>4.31. Stringlines</p> <p>4.32. Trowels</p>

	<p>4.33 Wet and dry diamond saws</p> <p>4.34 Wheelbarrows</p> <p>4.35 Wire brushes</p> <p>4.36 Wooden floats</p> <p>4.37 Work platforms.</p>
5. Quality requirements	<p>5.1. Bangladesh standards.</p> <p>5.2. Internal company quality policy and standards.</p> <p>5.3. Manufacturer specifications.</p> <p>5.4. Workplace operations and procedures.</p>
6. Materials	<p>6.1. Adhesives.</p> <p>6.2. Caulking compound.</p> <p>6.3. Cement mortar (with and without additives).</p> <p>6.4. Clouts.</p> <p>6.5. Cornice adhesive.</p> <p>6.6. Fixings and fasteners.</p> <p>6.7. Patching materials.</p> <p>6.8. Plasterboard nails.</p> <p>6.9. Pre-mixed and mixed fillers.</p> <p>6.10. Sand and cement.</p> <p>6.11. Self-tapping screws.</p> <p>6.12. Soft sheet nails.</p> <p>6.13. Wall board adhesive.</p> <p>6.14. Acoustic underlay material.</p> <p>6.15. Crack suppression membrane.</p>
7. Underlay preparation	<p>7.1. Acoustic.</p> <p>7.2. In sheet or liquid form.</p> <p>7.3. Provide for crack suppression (in membrane form).</p> <p>7.4. Chemical and mechanical preparation of surfaces.</p> <p>7.5. Rendering to provide a flat surface.</p> <p>7.6. Use of underlay material.</p>
8. Substrate surface.	<p>8.1. Fibre cement sheets or other lining material or cladding of a similar nature.</p> <p>8.2. Painted surfaces.</p> <p>8.3. Pre-cast cladding.</p> <p>8.4. Solid plaster.</p> <p>8.5. Stone, concrete, timber, waterproof plasterboard, masonry and brick/block.</p> <p>8.6. Terrazzo.</p> <p>8.7. Wall and floor tiles.</p>
9. Surface-mounted construction.	<p>9.1. Aluminium framework fixing.</p> <p>9.2. Attachment of steel brackets or fabricated units.</p> <p>9.3. Brick or block walls or abutments.</p> <p>9.4. Curtain walling fixing.</p> <p>9.5. Fitment units.</p> <p>9.6. Formwork and false work construction.</p> <p>9.7. Light steel partition walls.</p> <p>9.8. Stair installations.</p> <p>9.9. Timber partition walls.</p>
10. Types of tiles.	<p>10.1. Ceramic</p> <p>10.2. Glass</p> <p>10.3. Granite</p>

	<ul style="list-style-type: none"> 10.4. Marble 10.5. Porcelain 10.6. Stone 10.7. Terracotta.
11. Surfaces.	<ul style="list-style-type: none"> 11.1. Block work. 11.2. Brick work. 11.3. Ceramic or fibro cement underlay. 11.4. Concrete work. 11.5. Plaster work. 11.6. Fibre cement sheet. 11.7. Rendered surfaces. 11.8. Timber. 11.9. Other approved waterproof surfaces.
<p>Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.</p>	
1. Critical aspects of competency.	<ul style="list-style-type: none"> 1.1 Performed surface preparation for tile work. 1.2 Use of tools, equipments and materials.
2. Underpinning knowledge.	<ul style="list-style-type: none"> 2.1 Job safety and safe work method statements. 2.2 Materials storage and environmentally friendly waste management. 2.3 Plans, drawings and specifications. 2.4 Calculation of material requirements. 2.5 Quality requirements.
3. Underpinning skills.	<ul style="list-style-type: none"> 3.1 Preparing surface for lying of tiles. 3.2 Estimating materials and tools. 3.3 Maintaining tools and equipment. 3.4 Use of tools and equipment. 3.5 Proper handling and storing of materials.
4. Required attitude.	<ul style="list-style-type: none"> 4.1. Commitment to occupational safety and health. 4.2. Communication with peers, sub-ordinates and seniors in workplace. 4.3. Promptness in carrying out activities. 4.4. Tidiness and timeliness. 4.5. Respect of peers, sub-ordinates and seniors in workplace. 4.6. Environmental concern. 4.7. Sincere and honest to duties.
5. Resource implication.	<ul style="list-style-type: none"> 5.1. Tools, equipment and physical facilities appropriate to perform activities. 5.2. Materials, consumables to perform activities.
6. Methods of assessment	<p>Methods of assessment may includes but not limited to:</p> <ul style="list-style-type: none"> 6.1. Demonstration. 6.2. Written. 6.3. Oral questions.
7. Context of assessment.	Competencies may be assessed in the work place or in a simulated work place
<p>Accreditation Requirements Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the</p>	

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 Qualification Framework for Bangladesh
Tile work: Pre-voc 2
Unit of Competency

Unit Code and Title	TWPV2002A1: Perform floor tile work.
Nominal Hours	50 Hours
Unit Descriptor	This unit of competency requires the knowledge, skills and attitude to perform floor tiles. It includes cutting tiles, laying and setting of tiles in workplace.
Element of Competency	Performance Criteria <i>Italianized items are elaborated in the range of variable</i>
1. Select tools, equipment and materials.	1.1. Tools, equipment, tiling materials and floor tiles are selected and collected. 1.2. Material quantity requirement are calculated in accordance with plans and specifications and quality requirements .
2. Cut tiles.	2.1. Safe OSH practices are followed. 2.2. PPE is selected and worn as per requirement. 2.3. Floor tiles are cut without damage as per requirement. 2.4. Tile is edged to form miter as per requirement.
3. Lay floor tiles.	3.1. Floor is checked for level, square and membranes. 3.2. Substrate surface is prepared free from contaminants and residues in accordance with plan. 3.3. Adhesive is matched with tile and substrate material and mixed according to usage. 3.4. Cement mortar is prepared to consistency and floor is slurred and screened. 3.5. Tiles are laid in conformance to standards and specifications, maintaining bond with joints as per requirement.
4. Grout and seal the tiles.	4.1. Joints are cleaned and prepared to receive grout according to manufacturer specifications. 4.2. Grout is mixed and applied as per requirement. 4.3. Tiles are cleaned and polished with dry cloth. 4.4. Tiles are sealed and protected as per requirement.
5. Clean and store.	5.1. Workplace is cleared and materials disposed of, reused or recycled. 5.2. Plant, tools and equipment are cleaned, checked, maintained and stored as per requirement.
Range of Variables	
Variable	Range (may include but not limited to):

1. OSH	<p>1.1. Personal Protective Equipment (<i>PPE</i>) is used.</p> <p>1.2. <i>Hazards</i> at workplace explained.</p> <p>1.3. <i>Unsafe tools</i> at workplace are listed.</p> <p>1.4. <i>Flammable</i> materials are recognized.</p> <p>1.5. Access and storable materials are preserved in designated place.</p> <p>1.6. OSH equipment is used safely according to specifications, legislation and standard operating procedures.</p>
2. PPE	<p>2.1 Musk.</p> <p>2.2 Safety shoes.</p> <p>2.3 Safety goggles.</p> <p>2.4 Apron.</p> <p>2.5 Cap.</p> <p>2.6 Helmet.</p>
3. Quality requirements	<p>3.1 Internal company quality policy and standards.</p> <p>3.2 Manufacturer specifications.</p> <p>3.3 Workplace operations and procedures.</p>
4. Tools and equipment	<p>4.1 Brooms</p> <p>4.2 Brushes</p> <p>4.3 Buckets</p> <p>4.4 Caulking guns</p> <p>4.5 Cement sheet cutters</p> <p>4.6 Hammers</p> <p>4.7 Hose and water sprays</p> <p>4.8 Ladders</p> <p>4.9 Levelling equipment</p> <p>4.10 Lump hammers</p> <p>4.11 Measuring tapes and rules</p> <p>4.12 Mortar boards</p> <p>4.13 Nippers</p> <p>4.14 Pointed grouters</p> <p>4.15 Power drills</p> <p>4.16 Power leads</p> <p>4.17 Rags</p> <p>4.18 Rubber mallets</p> <p>4.19 Sanding blocks</p> <p>4.20 Saws</p> <p>4.21 Scrapers</p> <p>4.22 Shovels</p> <p>4.23 Spacers and wedges</p> <p>4.24 Spatulas</p> <p>4.25 Sponges</p> <p>4.26 Squares</p> <p>4.27 Squeegees</p> <p>4.28 Straight edges</p> <p>4.29 String lines</p> <p>4.30 Tile cutters and scribes</p> <p>4.31 Trowels</p>

	4.32 Wet and dry diamond saws 4.33 Wheelbarrows 4.34 Wire brushes 4.35 Wooden floats 4.36 Concrete mixers 4.37 Masonry drill bits 4.38 Power grinders 4.39 Power sanders
5. Materials	5.1 Adhesives 5.2 Caulking compounds 5.3 Cement mortar (with and without additives) 5.4 Grout 5.5 Sealers 5.6 Tiles
6. Tiles	6.1 Ceramic 6.2 Glass 6.3 Granite 6.4 Marble 6.5 Porcelain 6.6 Stone 6.7 Terracotta
7. Substrate surface	7.1 Approved waterproof substrates 7.2 Compressed sheeting 7.3 Concrete 7.4 Fibre cement underlay 7.5 Rendered concrete 7.6 Timber
8. Adhesives	8.1 Adhesives 8.2 Cement mortar 8.3 Cement mortar with adhesive additive.
9. Grout	9.1 Cementations 9.2 Epoxy
Evidence Guide	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency.	1.1 Preparation of the tilling area. 1.2 Tiles cutting. 1.3 Laying and fixing floor tiles.
2. Underpinning knowledge.	2.1 Material safety data sheets (MSDS) and hazards associated with solvents, adhesives and cement or epoxy-based grouts. 2.2 Plans, drawings and specifications. 2.3 Use of tools and equipment types, characteristics, and limitations. 2.4 Calculation of material requirements. 2.5 Quality requirements.
3. Underpinning skills.	3.1 Performing preparing setting out tiles. 3.2 Performing layout and fixing tiles in floor. 3.3 Grouting and setting tiles in floor.
4. Required attitude.	4.1. Commitment to occupational safety and health.

	<p>4.2. Communication with peers, sub-ordinates and seniors in workplace.</p> <p>4.3. Promptness in carrying out activities.</p> <p>4.4. Tidiness and timeliness.</p> <p>4.5. Respect of peers, sub-ordinates and seniors in workplace.</p> <p>4.6. Environmental concern.</p> <p>4.7. Sincere and honest to duties.</p>
5. Resource implication.	<p>5.1. Tools, equipment and physical facilities appropriate to perform activities.</p> <p>5.2. Materials, consumables to perform activities.</p>
6. Method of assessment	<p><i>Methods of assessment may includes but not limited to:</i></p> <p>6.1. Demonstration</p> <p>6.2. Written or oral questions</p> <p>6.3. Interview.</p> <p>6.4. Continuous assessment.</p> <p>6.5. Assignment.</p>
7. Context of assessment.	Competencies may be assessed in the work place or in a simulated work place
<p>Accreditation Requirements</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>	

National Technical and Vocational Qualification Framework for Bangladesh
Tile work: Pre-voc 2
Unit of Competency

Unit Code and Title	TWPV2003A1: Perform wall tile work.
Nominal Hours	50 Hours
Unit Descriptor	This unit of competency requires the knowledge, skills and attitude to perform wall tile work. It includes cutting tiles, laying and fixing of wall tiles.
Element of Competency	Performance Criteria <i>Italianized items are elaborated in the range of variable</i>
1. Select tools, equipment and materials.	1.1. Tools, equipment, tiling materials and wall tiles are selected and collected. 1.2. Material quantity requirements are calculated in accordance with plans and specifications and quality requirements .
2. Cut tiles.	2.1. Safe OSH practice are followed. 2.2. PPE is selected and worn as per requirement. 2.3. Wall tiles are cut without damage as per requirement. 2.4. Tile is edged to form a miter as per requirement.
3. Lay wall tiles.	3.1. Wall is checked for level, vertical in 90 degrees and square as per requirement. 3.2. Substrate surface is prepared free from contaminants and residues in accordance with plan. 3.3. Adhesive is matched with tile and substrate material and mixed according to usage. 3.4. Cement mortar is prepared to consistency and floor is slurred and screened. 3.5. Tiles are laid in conformance to standards and specifications, maintaining bond with joints as per requirement.
4. Grout and seal the tiles.	4.1. Joints are cleaned and prepared to receive Grout as per requirement. 4.2. Grout is mixed and applied as per requirement. 4.3. Tiles are cleaned and polished with dry cloth. 4.4. Tiles are sealed and protected.
5. Clean and store.	5.1. Workplace is cleared and materials disposed of, reused or recycled. 5.2. Plant, tools and equipment are cleaned, checked, maintained and stored as per requirement.
Range of Variables	
Variable	Range (the following may include but not limited to):
1. OSH	1.1. Personal Protective Equipment (PPE) is used. 1.2. Hazards at workplace explained. 1.3. Unsafe tools at workplace are listed. 1.4. Flammable materials are recognized. 1.5. Access and storable materials are preserved in

	designated place. 1.6. OSH equipment is used safely according to specifications, legislation and standard operating procedures.
2. PPE	2.1 Musk. 2.2 Safety shoes. 2.3 Safety goggles. 2.4 Apron. 2.5 Cap. 2.6 Helmet.
3. Quality requirements	3.1 Internal company quality policy and standards 3.2 Manufacturer specifications 3.3 Workplace operations and procedures
4. Tools and equipment	4.1 Brooms 4.2 Brushes 4.3 Buckets 4.4 Caulking guns 4.5 Cement sheet cutters 4.6 Hammers 4.7 Hose and water sprays 4.8 Ladders 4.9 Levelling equipment 4.10 Lump hammers 4.11 Measuring tapes and rules 4.12 Mortar boards 4.13 Nippers 4.14 Pointed grouters 4.15 Power drills 4.16 Power leads 4.17 Rags 4.18 Rubber mallets 4.19 Sanding blocks 4.20 Saws 4.21 Scrapers 4.22 Shovels 4.23 Spacers and wedges 4.24 Spatulas 4.25 Sponges 4.26 Squares 4.27 Squeegees 4.28 Straight edges 4.29 String lines 4.30 Tile cutters and scribes 4.31 Trowels 4.32 Wet and dry diamond saws 4.33 Wheelbarrows 4.34 Wire brushes 4.35 Wooden floats 4.36 Concrete mixers

	4.37 Masonry drill bits 4.38 Power grinders 4.39 Power sanders
5. Materials	5.1 Adhesives 5.2 Caulking compounds 5.3 Cement mortar (with and without additives) 5.4 Grout 5.5 Sealers 5.6 Tiles
6. Tiles	6.1 Ceramic 6.2 Glass 6.3 Granite 6.4 Marble 6.5 Porcelain 6.6 Stone 6.7 Terracotta
7. Substrate surface	7.1 Approved waterproof substrates 7.2 Compressed sheeting 7.3 Concrete 7.4 Fibre cement underlay 7.5 Rendered concrete 7.6 Timber
8. Adhesives	8.1 Adhesives 8.2 Cement mortar 8.3 Cement mortar with adhesive additive.
9. Grout	9.1 Cementations 9.2 Epoxy
Evidence Guide	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency.	1.1 Cutting of tiles. 1.2 Wall tiles fixing vertically in 90 degree.
2. Underpinning knowledge.	2.1 Materials storage and environmentally friendly waste management. 2.2 Plans, drawings and specifications. 2.3 Use of tools and equipment types, characteristics, uses and limitations. 2.4 Calculation of material requirements. 2.5 Quality requirements.
3. Underpinning skills.	3.1 Performing preparing setting out tiles. 3.2 Performing layout and fixing tiles in wall. 3.3 Grouting and setting tiles in wall.
4. Required attitude.	4.1. Commitment to occupational safety and health. 4.2. Communication with peers, sub-ordinates and seniors in workplace. 4.3. Promptness in carrying out activities. 4.4. Tidiness and timeliness. 4.5. Respect of peers, sub-ordinates and seniors in workplace. 4.6. Environmental concern.

	4.7. Sincere and honest to duties.
5. Resource implication.	The following resources must be provided. 5.1. Tools, equipment and physical facilities appropriate to perform activities. 5.2. Materials, consumables to perform activities.
6. Method of assessment	Methods of assessment may includes but not limited to: 6.1. Demonstration 6.2. Written test 6.3 Oral questions
7. Context of assessment.	Competencies may be assessed in the work place or in a simulated work place
<p>Accreditation Requirements</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>	