



# Skills for Employment Investment Program (SEIP)

## COMPETENCY STANDARD FOR PREPARATORY PROCESS IN WEAVING *(TEXTILE SECTOR)*

Finance Division, Ministry of Finance  
Government of the People's Republic of Bangladesh

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## Copyright

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The Competency Standard for Preparatory Process in Weaving is a document for the development of curricula, teaching and learning materials, and assessment tools. It also serves as the document for providing training consistent with the requirements of industry in order for individuals who graduated through the established standard via competency-based assessment to be suitably qualified for a relevant job.

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## List of Abbreviations

<b>General</b>	
BMET	Bureau of Manpower Employment and Training
B-SEP	Bangladesh Skills for Employment and Productivity
BTEB	Bangladesh Technical Education Board
DTE	Directorate of Technical Education
ILO	International Labor Organization
ISC	Industry Skills Council
NPVC	National Pre-Vocation Certificate
NTVQF	National Technical and Vocational Qualifications Framework
PPP	Public Private Partnership
SCDC	Standards and Curriculum Development Committee
SEIP	Skills for Employment Investment Program
TVET	Technical Vocational Education and Training
UoC	Unit of Competency
<b>Occupation Specific</b>	
EPI	Ends per inch
OHS	Occupational health and safety
PPE	Personal protective equipment
PPI	Picks per inch
PPW	Preparatory process in weaving
PVA	Polyvinyl alcohol
SOP	Standard operating procedure
TPI	Twist per section

## Introduction

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The Skills for Employment Investment Program (SEIP) Project of the Finance Division of the Ministry of Finance has embarked on a project which aims to qualitatively and quantitatively expand the skilling capacity of identified public and private training providers by establishing and operationalising a responsive skill ecosystem and delivery mechanism through a combination of well-defined set of funding triggers and targeted capacity support.

Among the many components of the project, one is to promote a Market Responsive Inclusive Skills Training Delivery programme. Key priority economic growth sectors identified by the government have been targeted by the project to improve current job skills along with up-skilling of the existing workforce to ensure 'required skills to industry standards'. Training providers are encouraged and supported to work with industry to address identified skills and knowledge to enable industry growth and increased employment through the provision of market responsive inclusive skills training programmes. Priority sectors were identified to adopt a demand driven approach to training with effective inputs from Industry Skills Councils (ISC's), employer associations and employers.

This document is developed to improve skills and knowledge in accordance with the job roles, duties and tasks of the occupation and ensure that the required skills and knowledge are aligned to industry requirements.

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

## Overview

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

The purpose of a competency standards is to:

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

Competency standards are developed by a working group comprised of national and international subject-matter experts, SEIP, BTEB, ISC, and industry experts to identify the competencies required of an occupation in a particular sector.

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

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

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

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

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

Together, all the parts of a unit of competency:

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

## Approval Sheet

Identification and validation of units of competency and elements for this occupation were made by experts within this sector. A series of meetings were held to accurately capture industry and employer needs and expectations, and develop the competency framework that would help to enhance the employability of the youth trained. This process started on 22 April 2018 and concluded with a validation workshop with working group on 22 July 2018.

### Experts Involved

Industry and subject-matter experts who provided their valuable inputs to develop this competency standard [April – July 2018]:

Name	Organisation	Designation
Engr. Mozaffar Hossain	SIM Group	Managing Director
Mr. Masud Rana	Asia Composite Mills Limited	Managing Director
Mr. Abu Rayhan Albeeroone	BTMA-SEIP	Chief Coordinator
Md. Khairul Islam Khan	Noman Weaving Mills Limited	Executive Director
Md. Jahidul Islam	Noman Weaving Mills Limited	Production Manager - Weaving
Md. Mamunur Rashid	Saad-Shan Textile Mills Limited	Assistant Manager - Sizing
Md. Shah Alam	Noman Composite Textiles Limited	Deputy General Manager
Md. Kamruzzaman	Talha Fabrics Limited	General Manager
Md. Sepon Siddique	Noman Weaving Mills Limited	Assistant General Manager
Md. Nizam Uddin	Noman Home Textile Mills Limited	Deputy General Manager
Shilpi Akter	British Council - SD03	National Subject Matter Consultant - Textile Sector

### Development Workshop

Working group formation and competency standard development workshop participants [held on 28 June 2018]:

Name	Organisation	Designation
Md. Kamruzzaman	Talha Fabrics Limited	General Manager
Md. Sepon Siddique	Noman Weaving Mills Limited	Assistant General Manager
Mr. Abu Rayhan Albeeroone	BTMA-SEIP	Chief Coordinator

Name	Organisation	Designation
Dr. Md. Shah Alam Majumder	BTEB	Specialist (Course Accreditation)
Md. Monsurul Haque	SIM Fabrics	Assistant Manager - Weaving
Suja Ahamed	NITER	Lecturer
Syed Nasir Ershad	SEIP	AEPD (Public1)
Md. Ahsan Habib	SEIP	TVET Specialist
Mr Mohiuzzaman	SEIP	Course Specialist
David King	British Council - SD03	Team Leader
Shilpi Akter	British Council - SD03	National Subject Matter Consultant - Textile Sector

### Validation Workshop

Competency standard validation workshop participants [held on 22 July 2018]:

Name	Organisation	Designation
Ismat Zerín	NITER	Assistant Professor
Md. Kamruzzaman	Talha Fabrics Limited	General Manager
Suja Ahamed	NITER	Lecturer
Md. Sepon Siddique	Noman Weaving Mills Limited	Assistant General Manager
Muhammad Chan Mahmud	Noman Composite Textile Mills Limited	Assistant General Manager
Mr. Abu Rayhan Albeeroone	BTMA-SEIP	Chief Coordinator
Md. Abdur Razzaque	BTEB-SEIP	Specialist-1 (Competency Standards)
Syed Nasir Ershad	SEIP	AEPD (Public1)
Md. Ahsan Habib	SEIP	TVET Specialist
Mr Mohiuzzaman	SEIP	Course Specialist
David King	British Council - SD03	Team Leader
Shilpi Akter	British Council - SD03	National Subject Matter Consultant - Textile Sector

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

- a chart with an overview of all Units of Competency for the relevant occupation, trade or job including the Unit Codes and the Unit of Competency titles and corresponding Elements



- the Competency Standard that includes the Unit of Competency, Unit Descriptor, Elements and Performance Criteria, Range of Variables, Curricular Content Guide and Assessment Evidence Guide

**Committee Workshop**

The National competency standards for National Skills Certificate in Preparatory Process in Weaving, NTVQF Level [INSERT LEVEL] qualification is a document developed by the Skill for Employment Investment Programme (SEIP), Finance Division, Ministry of Finance. This standard has been developed by an industry expert group under guidance of SEIP. The standard was approved by the SCDC [BTEB to insert date] at NTVQF Cell, BTEB.

**Respectable members of the SCDC:**

Preparatory Process in Weaving - Level [INSERT LEVEL]		

## Course Structure

SL	Unit Code and Title		Level	Nominal Duration (Hours)
<b>Generic Competencies (5 units of competency required)</b>				
1	SEIP-TEX-PPW-01-G	Use basic mathematical concepts		8
2	SEIP-TEX-PPW-02-G	Apply occupational health and safety (OHS) practice in the workplace		8
3	SEIP-TEX-PPW-03-G	Carry out workplace interaction		8
4	SEIP-TEX-PPW-04-G	Operate in a team environment		8
5	SEIP-TEX-PPW-05-G	Apply basic IT skills		8
<b>Sub-Total</b>				<b>40</b>
<b>Sector-specific Competencies (3 units of competency required)</b>				
1	SEIP-TEX-PPW-01-S	Explore the history of Textile Sector		16
2	SEIP-TEX-PPW-02-S	Use hand and power tools		8
3	SEIP-TEX-PPW-03-S	Read and interpret sketches and drawings		8
<b>Sub-Total</b>				<b>32</b>
<b>Occupation-specific Competencies (4 units of competency required)</b>				
1	SEIP-TEX-PPW-01-O	Perform winding operations		40
2	SEIP-TEX-PPW-02-O	Perform direct warping operations		72
3	SEIP-TEX-PPW-03-O	Perform sectional warping operations		80
4	SEIP-TEX-PPW-04-O	Perform sizing operations		96
<b>Sub-Total</b>				<b>288</b>
<b>Total Nominal Learning Hours</b>				<b>360</b>

## Competency Chart

Units of Competency	Elements		
Use basic mathematical concepts SEIP-TEX-PPW-01-G	Identify calculation requirements in the workplace	Select appropriate mathematical methods/concepts for the calculation	Use tools and instruments to perform calculations
Apply occupational health and safety (OHS) practice in the workplace SEIP-TEX-PPW-02-G	Identify OHS policies and procedures	Apply personal health and safety practices	Report hazards and risks
Carry out workplace interaction SEIP-TEX-PPW-03-G	Interpret workplace communication and etiquette	Read and understand workplace documents	Participate in workplace meetings and discussions
Operate in a team environment SEIP-TEX-PPW-04-G	Identify team goals and work processes	Identify own role and responsibilities within team	Communicate and co-operate with team members
Apply basic IT skills SEIP-TEX-PPW-05-G	Identify and use most commonly used IT tools	Understand use of computer	Work with word processing application
	Access email and search the internet		

## Sector-specific (Common) Competencies

<p>Explore the history of Textile Sector SEIP-TEX-PPW-01-S</p>	<p>Identify the background of textile sector</p>	<p>Identify main industries within textile sector</p>	<p>Identify materials and machines used in weaving</p>
<p>Use hand and power tools SEIP-TEX-PPW-02-S</p>	<p>Identify and inspect hand and power tools</p>	<p>Use hand tools properly and safely</p>	<p>Operate power tools properly and safely</p>
	<p>Clean and maintain hand tools and power tools</p>		
<p>Read and interpret sketches and drawings SEIP-TEX-PPW-03-S</p>	<p>Identify information and specifications</p>	<p>Interpret sketches and drawings</p>	

## Occupation-specific (Core) Competencies

Perform winding operations SEIP-TEX-PPW-01-O	Identify machine and machine parts	Identify production process	Perform creeling, feeding and knotting
	Operate winding machine	Clean and maintain machine	Dispose of waste material
Carry out direct warping operations SEIP-TEX-PPW-02-O	Identify machine and machine parts	Identify production process	Perform creeling, feeding and knotting
	Operate direct warping machine	Clean and maintain machine	Dispose of waste material
Perform sectional warping operations SEIP-TEX-PPW-03-O	Identify machine and machine parts	Identify production process	Perform creeling, feeding and knotting
	Operate sectional warping machine	Clean and maintain machine	Dispose of waste material
Perform sizing operations SEIP-TEX-PPW-04-O	Identify machine, zones and functions	Identify production process	Identify sizing ingredients
	Perform size cooking	Perform creeling, feeding and knotting	Operate sizing machine
	Clean and maintain machine	Dispose of waste material	

## Units and Elements Table

### Generic – Compulsory (5 units of competency required)

Code	Unit of Competency	Elements of Competency	Duration (hours)
SEIP-TEX-PPW-01-G	Use basic mathematical concepts	<ol style="list-style-type: none"> <li>1. Identify calculation requirements in the workplace.</li> <li>2. Select appropriate mathematical methods/concepts for the calculation.</li> <li>3. Use tools and instruments to perform calculations.</li> </ol>	8
SEIP-TEX-PPW-02-G	Apply occupational health and safety (OHS) practice in the workplace	<ol style="list-style-type: none"> <li>1. Identify OHS policies and procedures.</li> <li>2. Apply personal health and safety practices.</li> <li>3. Report hazards and risks.</li> <li>4. Respond to emergencies.</li> </ol>	8
SEIP-TEX-PPW-03-G	Carry out workplace interaction	<ol style="list-style-type: none"> <li>1. Interpret workplace communication and etiquette.</li> <li>2. Read and understand workplace documents.</li> <li>3. Participate in workplace meetings and discussions.</li> <li>4. Practice professional ethics at work.</li> </ol>	8
SEIP-TEX-PPW-04-G	Operate in a team environment	<ol style="list-style-type: none"> <li>1. Identify team goals and work processes.</li> <li>2. Identify own role and responsibilities within team.</li> <li>3. Communicate and co-operate with team members.</li> <li>4. Practice problem solving within the team.</li> </ol>	8
SEIP-TEX-PPW-05-G	Apply basic IT skills	<ol style="list-style-type: none"> <li>1. Identify and use most commonly used IT tools.</li> <li>2. Understand use of computer.</li> <li>3. Work with word processing application.</li> <li>4. Access email and search the internet.</li> </ol>	8
<b>Total Hours</b>			<b>40</b>

### Sector-specific – Compulsory (3 units of competency required)

Code	Unit of Competency	Elements of Competency	Duration (hours)
SEIP-TEX-PPW-01-S	Explore the history of Textile Sector	<ol style="list-style-type: none"> <li>1. Identify the background of textile sector.</li> <li>2. Identify main industries within textile sector.</li> <li>3. Identify materials and machines used in weaving.</li> <li>4. Identify preparatory process in weaving.</li> <li>5. Identify prime local and export markets.</li> </ol>	16
SEIP-TEX-PPW-02-S	Use hand and power tools	<ol style="list-style-type: none"> <li>1. Identify and inspect hand and power tools.</li> <li>2. Use hand tools properly and safely.</li> <li>3. Operate power tools properly and safely.</li> <li>4. Clean and maintain hand and power tools.</li> </ol>	8
SEIP-TEX-PPW-03-S	Read and interpret sketches and drawings	<ol style="list-style-type: none"> <li>1. Interpret information and specifications.</li> <li>2. Read and interpret sketches and drawings.</li> </ol>	8
<b>Total Hours</b>			<b>32</b>



### Occupation-specific – Compulsory (4 units of competency required)

Code	Unit of Competency	Elements of Competency	Duration (hours)
SEIP-TEX-PPW-01-O	Perform winding operation	<ol style="list-style-type: none"> <li>1. Identify machine and machine parts.</li> <li>2. Identify production process.</li> <li>3. Perform creeling, feeding and knotting.</li> <li>4. Operate winding machine.</li> <li>5. Clean and maintain machine.</li> <li>6. Dispose of waste material.</li> </ol>	40
SEIP-TEX-PPW-02-O	Perform direct warping operation	<ol style="list-style-type: none"> <li>1. Identify machine and machine parts.</li> <li>2. Identify production process</li> <li>3. Perform creeling, feeding and knotting.</li> <li>4. Operate direct warping machine.</li> <li>5. Clean and maintain machine.</li> <li>6. Dispose of waste material.</li> </ol>	72
SEIP-TEX-PPW-03-O	Perform sectional warping operation	<ol style="list-style-type: none"> <li>1. Identify machine and machine parts.</li> <li>2. Identify production process</li> <li>3. Perform creeling, feeding and knotting.</li> <li>4. Operate sectional warping machine.</li> <li>5. Clean and maintain machine.</li> <li>6. Dispose of waste material.</li> </ol>	80
SEIP-TEX-PPW-04-O	Perform sizing operation	<ol style="list-style-type: none"> <li>1. Identify machine, zones and functions.</li> <li>2. Identify production process</li> <li>3. Identify sizing ingredients.</li> <li>4. Perform size cooking.</li> <li>5. Perform creeling, feeding and knotting.</li> <li>6. Operate sizing machine.</li> <li>7. Clean and maintain machine.</li> <li>8. Dispose of waste material.</li> </ol>	96
<b>Total Hours</b>			<b>288</b>

## Generic Competencies

<b>Unit Title:</b>	Use basic mathematical concepts
<b>Unit Code:</b>	SEIP-TEX-PPW-01-G
<b>Nominal Hours:</b>	8 hours
<b>Unit Descriptor:</b>	This unit covers the skills, knowledge and attitudes required to perform computations using basic mathematical concepts in the workplace. It specifically includes identifying general calculation requirements, selecting appropriate mathematical method/concept, and forming and solving mathematical problems in the workplace using appropriate tools and instruments.
<b>Elements of Competency</b>	<b>Performance Criteria</b> ( <b><u>bold and underlined</u></b> terms are elaborated in the Range of Variables)
1. Identify calculation requirements in the workplace	1.1. <b><u>Calculation requirements</u></b> are identified from <b><u>workplace information</u></b> . 1.2. Mathematical problems are constructed from workplace information.
2. Select appropriate mathematical methods/concepts for the calculation	2.1. <b><u>Appropriate method</u></b> is selected to carry out calculation requirements. 2.2. Constructed mathematical problems are solved with appropriate method.
3. Use tools and instruments to perform calculations	3.1. Tools and instruments required for computation are identified. 3.2. Calculation is performed using appropriate tools and instruments accurately.

Range of Variables	
Variable	Range ( <i>may include but not limited to</i> )
1. Calculation requirements	1.1. Unit 1.2. Area 1.3. Height/ length/ breadth/ thickness 1.4. Diameter 1.5. Weight 1.6. Capacity 1.7. Time 1.8. Temperature 1.9. Material/data usage 1.10. Speed 1.11. Costing

Range of Variables	
Variable	Range ( <i>may include but not limited to</i> )
2. Workplace information	2.1. Floor environment 2.2. Design sheet 2.3. Specification sheet 2.4. Working chart/drawing 2.5. Standard operating procedure (SOP) 2.6. Job order
3. Appropriate method	3.1. Addition 3.2. Subtraction 3.3. Division 3.4. Multiplication 3.5. Conversion 3.6. Percentage and ratio calculation 3.7. Simple equation
4. Tools and instruments	4.1. Calculator 4.2. Cell phone 4.3. Computer 4.4. Ruler

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	Assessment must evidence that the candidate: <ol style="list-style-type: none"> <li>1.1. Identified calculation requirements from workplace information</li> <li>1.2. Selected appropriate method to carry out the calculation requirements</li> <li>1.3. Completed calculations using appropriate tools and instruments</li> </ol>
2. Underpinning knowledge	<ol style="list-style-type: none"> <li>2.1. Numerical concepts</li> <li>2.2. Basic mathematical methods such as addition, subtraction, multiplication, division and percentage</li> <li>2.3. Mathematical language, symbols and terminology</li> <li>2.4. Measuring units</li> </ol>
3. Underpinning skills	<ol style="list-style-type: none"> <li>3.1. Constructing simple problems from workplace information</li> <li>3.2. Solving problems using appropriate method, tools and instruments</li> <li>3.3. Using appropriate tools and instruments</li> </ol>

### 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.

<b>4. Underpinning attitudes</b>	<b>4.1.</b> Prompt in carrying out activities <b>4.2.</b> Tidy and punctual <b>4.3.</b> Respectful of peers, subordinates and seniors in the workplace <b>4.4.</b> Safely use tools and equipment <b>4.5.</b> Sincere and honest concerning duties
<b>5. Resource implications</b>	The following resources must be provided: <b>5.1.</b> Workplace (simulated or actual) <b>5.2.</b> Calculator <b>5.3.</b> Cell phone <b>5.4.</b> Computer/laptop/notebook <b>5.5.</b> Measuring tape <b>5.6.</b> Ruler <b>5.7.</b> Projector <b>5.8.</b> Stationary <b>5.9.</b> Learning manual
<b>6. Methods of assessment</b>	Methods of assessment may include but is not limited to: <b>6.1.</b> Written test <b>6.2.</b> Oral test <b>6.3.</b> Observation <b>6.4.</b> Demonstration <b>6.5.</b> Portfolio
<b>7. Context of assessment</b>	<b>7.1.</b> Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency. <b>7.2.</b> Assessment must be done by a suitably qualified/certified assessor.

### 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 NTVQF qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.

<b>Unit Title:</b>	Apply occupational health and safety (OHS) practice in the workplace
<b>Unit Code:</b>	SEIP-TEX-PPW-02-G
<b>Nominal Hours:</b>	8 hours
<b>Unit Descriptor:</b>	This unit covers the skills, knowledge and attitudes required to apply occupational health and safety (OHS) practices in the workplace. It specifically includes identifying OHS policies and procedures, applying personal health and safety practices, reporting hazards and risks, and responding to emergencies.
<b>Elements of Competency</b>	<b>Performance Criteria</b> ( <b><u>bold and underlined</u></b> terms are elaborated in the Range of Variables)
1. Identify OHS policies and procedures	<p>1.1. <b><u>OHS policies</u></b> and safe operating procedures are interpreted.</p> <p>1.2. Safety signs and symbols are identified and followed.</p> <p>1.3. Response, evacuation procedures and other contingency measures are interpreted correctly.</p>
2. Apply personal health and safety practices	<p>2.1. OHS policies and procedures are applied in the workplace including <b><u>personal protective equipment (PPE)</u></b>.</p> <p>2.2. Common health issues are recognised.</p> <p>2.3. Common safety issues are identified.</p>
3. Report hazards and risks	<p>3.1. Hazards and risks are identified.</p> <p>3.2. Hazards and risks assessment and controls are interpreted.</p>
4. Respond to emergencies	<p>4.1. Respond to alarms and warning devices.</p> <p>4.2. <b><u>Emergency response plans and procedures</u></b> are responded to.</p> <p>4.3. <b><u>First aid procedures</u></b> during emergency situations are identified.</p>

<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> ( <i>may include but not limited to</i> )
1. OHS policies	<p>1.1. Organisational OHS polices</p> <p>1.2. International OHS requirements</p> <p>1.3. Fire safety rules and regulations</p>
2. Emergency response plans and procedures	<p>2.1. Firefighting procedures</p> <p>2.2. Earthquake response procedures</p> <p>2.3. Emergency response plans and procedures</p> <p>2.4. Medical and first aid</p>

Range of Variables	
Variable	Range ( <i>may include but not limited to</i> )
3. First aid procedure	3.1. Washing of open wound 3.2. Washing chemically infected area 3.3. Applying bandage 3.4. Taking appropriate medicine
4. Personal protective equipment	4.1. Safety glasses 4.2. Ear plugs 4.3. Gloves 4.4. Apron 4.5. Helmet 4.6. Mask 4.7. Safety shoes

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	Assessment must evidence that the candidate: <ol style="list-style-type: none"> <li>1.1. Identified OHS policies and procedures</li> <li>1.2. Applied personal health and safety practices (including PPE)</li> <li>1.3. Reported hazards and risks</li> <li>1.4. Responded to emergencies</li> </ol>
2. Underpinning knowledge	<ol style="list-style-type: none"> <li>2.1. Workplace OHS policies and procedures</li> <li>2.2. Work safety procedures</li> <li>2.3. Emergency response procedures:               <ol style="list-style-type: none"> <li>2.3.1. Firefighting</li> <li>2.3.2. Earthquake response</li> <li>2.3.3. Accident response</li> </ol> </li> <li>2.4. Types of hazards (biological, chemical and physical) and their effects</li> <li>2.5. OHS awareness</li> <li>2.6. Personal protective equipment (PPE)</li> </ol>
3. Underpinning skills	<ol style="list-style-type: none"> <li>3.1. Identifying OHS policies and procedures</li> <li>3.2. Applying personal health and safety practices</li> <li>3.3. Reporting hazards and risks</li> <li>3.4. Responding to emergencies</li> </ol>

## 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.

<b>4. Underpinning attitudes</b>	<b>4.1.</b> Committed to occupational health and safety practices <b>4.2.</b> Communicates well with peers, subordinates and seniors in workplace <b>4.3.</b> Prompt in carrying out activities <b>4.4.</b> Tidy and punctual <b>4.5.</b> Sincere and honest concerning duties <b>4.6.</b> Responsible during emergencies
<b>5. Resource implications</b>	The following resources must be provided: <b>5.1.</b> Workplace (simulated or actual) <b>5.2.</b> Personal protective equipment (PPE) <b>5.3.</b> Firefighting equipment <b>5.4.</b> Emergency response manual <b>5.5.</b> First aid kits <b>5.6.</b> Projector <b>5.7.</b> Stationary <b>5.8.</b> Learning manual
<b>6. Methods of assessment</b>	Methods of assessment may include but is not limited to: <b>6.1.</b> Written test <b>6.2.</b> Demonstration <b>6.3.</b> Oral test <b>6.4.</b> Observation <b>6.5.</b> Portfolio
<b>7. Context of assessment</b>	<b>7.1.</b> Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency. <b>7.2.</b> Assessment must be done by a suitably qualified/certified assessor.

## Accreditation Requirements

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<b>Unit Title:</b>	Carry out workplace interaction
<b>Unit Code:</b>	SEIP-TEX-PPW-03-G
<b>Nominal Hours:</b>	8 hours
<b>Unit Descriptor:</b>	This unit covers the skills, knowledge and attitudes required to carry out workplace interaction. It specifically includes workplace communication, etiquette, understanding workplace documents, workplace meetings and discussions, and professional ethics at work.
<b>Elements of Competency</b>	<b>Performance Criteria</b> ( <b><u>bold and underlined</u></b> terms are elaborated in the Range of Variables)
1. Interpret workplace communication and etiquette	<p>1.1. Workplace codes of conduct are interpreted as per organisational guidelines.</p> <p>1.2. Appropriate lines of communication are maintained with supervisors and colleagues.</p> <p>1.3. Workplace interactions are conducted in a <b><u>courteous manner</u></b> to gather and convey information.</p> <p>1.4. <b><u>Workplace procedures and matters</u></b> are comprehended.</p>
2. Read and understand workplace documents	<p>2.1. Workplace documents are interpreted correctly.</p> <p>2.2. Visual information/symbols/signage are understood correctly and followed.</p> <p>2.3. Specific and relevant information are accessed from <b><u>appropriate sources</u></b>.</p> <p>2.4. Appropriate medium is used to transfer information and ideas.</p>
3. Participate in workplace meetings and discussions	<p>3.1. Team meetings are attended on time.</p> <p>3.2. Meeting procedures and etiquette are followed.</p> <p>3.3. Active participation is ensured, opinions are expressed and heard.</p> <p>3.4. Inputs are provided and interpreted in line with the meeting purpose.</p>
4. Practice professional ethics at work	<p>4.1. Responsibilities as a team member are performed.</p> <p>4.2. Tasks are performed in accordance with workplace procedures.</p> <p>4.3. Confidentiality is maintained.</p> <p>4.4. Inappropriate and conflicting situations are avoided.</p>



Range of Variables	
Variable	Range ( <i>may include but not limited to</i> )
1. Courteous manner	1.1. Effective questioning 1.2. Active listening 1.3. Speaking skills 1.4. Writing skill 1.5. Email etiquette
2. Workplace procedures and matters	2.1. Notes 2.2. Arranging a meeting 2.3. Agenda 2.4. Simple reports such as progress and incident reports 2.5. Job sheets 2.6. Operational manuals 2.7. Brochures and promotional material 2.8. Visual and graphic materials 2.9. Standards 2.10. OHS information 2.11. Signs
3. Appropriate sources	3.1. Human Resources (HR) Department 3.2. Managers 3.3. Supervisors 3.4. Management Information System (MIS)

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	Assessment must evidence that the candidate: <ol style="list-style-type: none"> <li>1.1. Interpreted workplace communication and etiquette</li> <li>1.2. Interpreted workplace instructions and symbols</li> <li>1.3. Performed active participation in workplace meetings</li> </ol>
2. Underpinning knowledge	<ol style="list-style-type: none"> <li>2.1. Workplace communication and etiquette</li> <li>2.2. Workplace documents, signs and symbols</li> <li>2.3. Meeting procedure and etiquette</li> <li>2.4. Professional ethics</li> </ol>
3. Underpinning skills	<ol style="list-style-type: none"> <li>3.1. Demonstrating workplace communication and etiquette</li> <li>3.2. Interpreting workplace instructions and symbols</li> <li>3.3. Demonstrating active participation in workplace meeting</li> <li>3.4. Applying professional ethics at work</li> </ol>

### 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.

<b>4. Underpinning attitudes</b>	<b>4.1.</b> Prompt in carrying out activities <b>4.2.</b> Tidy and punctual <b>4.3.</b> Respectful of peers, subordinates and seniors in the workplace <b>4.4.</b> Concerned about the work environment <b>4.5.</b> Sincere and honest concerning duties
<b>5. Resource implications</b>	The following resources must be provided: <b>5.1.</b> Workplace (simulated or actual) <b>5.2.</b> Workplace procedures <b>5.3.</b> Standard operating procedure <b>5.4.</b> Workplace documents, signs and symbols <b>5.5.</b> Codes of conduct <b>5.6.</b> Projector <b>5.7.</b> Stationary <b>5.8.</b> Learning manual
<b>6. Methods of assessment</b>	Methods of assessment may include but is not limited to: <b>6.1.</b> Written test <b>6.2.</b> Demonstration <b>6.3.</b> Oral test <b>6.4.</b> Observation <b>6.5.</b> Portfolio
<b>7. Context of assessment</b>	<b>7.1.</b> Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency. <b>7.2.</b> Assessment must be done by a suitably qualified/certified assessor.

### Accreditation Requirements

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<b>Unit Title:</b>	Operate in a team environment
<b>Unit Code:</b>	SEIP-TEX-PPW-04-G
<b>Nominal Hours:</b>	8 hours
<b>Unit Descriptor:</b>	This unit covers the skills, knowledge and attitudes required to operate in a team environment. It specifically includes team goals and work processes, roles and responsibilities, team communication and problem solving within the team.
<b>Elements of Competency</b>	<b>Performance Criteria</b> ( <b><u>bold and underlined</u></b> terms are elaborated in the Range of Variables)
1. Identify team goals and work processes	<p>1.1. Roles and objectives of the team are identified and interpreted.</p> <p>1.2. Roles and responsibilities of team members are identified and interpreted.</p>
2. Identify own role and responsibilities within team	<p>2.1. Personal role and responsibilities are identified within the team environment.</p> <p>2.2. Reporting relationships are interpreted within team and external to team.</p>
3. Communicate and co-operate with team members	<p>3.1. Other teammates' tasks are identified and support provided when requested.</p> <p>3.2. The team is encouraged through <b><u>sharing information</u></b> or expertise, working together to solve problems, and putting team success first.</p> <p>3.3. Views and opinions of other team members are interpreted and respected.</p>
4. Practice problem solving within the team	<p>4.1. Problems faced at the individual and team level are identified and showed insight into the root-causes of the problems.</p> <p>4.2. A range of solutions and courses of action are identified together with benefits, costs, and risks associated with each.</p> <p>4.3. The good ideas of others to help develop solutions are recognised and advice sought from those who have solved similar problems.</p> <p>4.4. It is looked beyond the obvious and not stopped at the first answers.</p>

Range of Variables	
Variable	Range (may include but not limited to)
1. Sharing information	1.1. Agenda 1.2. Minutes 1.3. Progress and incident reports 1.4. Operational manuals 1.5. Visual and graphic materials 1.6. Emails and SMS 1.7. Phone directory 1.8. Policy, procedure and standards 1.9. OHS information

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. Underpinning knowledge	1.1. Team goals and work processes 1.2. Roles and responsibilities 1.3. Finding problems and solving them
2. Underpinning skills	2.1. Identifying own role and responsibilities within team 2.2. Communicating and co-operating with team members 2.3. Demonstrating problem solving within the team
3. Underpinning attitudes	3.1. Active on teamwork 3.2. Prompt in carrying out activities 3.3. Tidy and punctual 3.4. Respectful of peers, subordinates and seniors in the workplace 3.5. Sincere and honest concerning duties
4. Underpinning knowledge	4.1. Team goals and work processes 4.2. Roles and responsibilities 4.3. Finding problems and solving them
5. Resource implications	The following resources must be provided: 5.1. Workplace (simulated or actual) 5.2. Projector 5.3. Stationary 5.4. Learning manual

### 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.

#### 6. Methods of assessment

Methods of assessment may include but is not limited to:

- 6.1. Written test
- 6.2. Demonstration
- 6.3. Oral test
- 6.4. Observation
- 6.5. Portfolio

#### 7. Context of assessment

- 7.1. Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency.
- 7.2. Assessment must be done by a suitably qualified/certified assessor.

### Accreditation Requirements

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<b>Unit Title:</b>	Apply basic IT skills
<b>Unit Code:</b>	SEIP-TEX-PPW-05-G
<b>Nominal Hours:</b>	8 hours
<b>Unit Descriptor:</b>	This unit covers the skills, knowledge and attitudes required to apply basic IT skills in the workplace. It specifically includes identifying common IT tools, using computer, word processing and spreadsheet applications, email and searching on internet.
<b>Elements of Competency</b>	<b>Performance Criteria</b> ( <b><u>bold and underlined</u></b> terms are elaborated in the Range of Variables)
1. Identify and use most commonly used IT tools	<p>1.1. History of information technology (IT) is identified and summarised.</p> <p>1.2. Commonly used <b><u>IT tools</u></b> are identified and described.</p>
2. Understand use of computer	<p>2.1. Basic parts of a computer are identified.</p> <p>2.2. Turning on and off technique of a computer is performed.</p> <p>2.3. Working environment, functions and features of operating system is interpreted.</p> <p>2.4. Simple trouble-shooting techniques are applied.</p>
3. Work with word processing application	<p>3.1. Word processing application appropriate to perform activity is operated.</p> <p>3.2. Basic typing technique to document is applied.</p> <p>3.3. Word processing techniques to document are employed.</p> <p>3.4. Personal CV writing using suitable word processing techniques is practiced.</p> <p>3.5. Saving and retrieving technique of a document is used.</p>
4. Work with spreadsheets	<p>4.1. Spreadsheet working environment, functions and features are identified and interpreted.</p> <p>4.2. Data entry on spreadsheet appropriate to perform activity is performed.</p> <p>4.3. <b><u>Data manipulation techniques</u></b> to spreadsheet document are applied.</p> <p>4.4. Spreadsheet document is created and saved.</p>
5. Access email and search the internet	<p>5.1. Use of email account in online environment is explained.</p> <p>5.2. Writing and sending of workplace emails is completed.</p> <p>5.3. Different <b><u>browsers</u></b> to work online are identified and selected.</p> <p>5.4. Browse different web portals and apply proper search techniques.</p>

Range of Variables	
Variable	Range (may include but not limited to)
1. IT tools	1.1. Cell phone 1.2. Tablets 1.3. Computers, laptops, notebooks 1.4. Internet 1.5. Software 1.6. Satellite
2. Data manipulation techniques	2.1. Sum 2.2. Average 2.3. Count 2.4. Max 2.5. Min 2.6. If 2.7. Sort 2.8. Fill 2.9. Header 2.10. Footer Print
3. Browsers	3.1. Internet Explorer 3.2. Firefox 3.3. Google Chrome 3.4. Opera 3.5. Safari 3.6. Omni Web 3.7. Microsoft Edge

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	Assessment must evidence that the candidate: <ol style="list-style-type: none"> <li>1.1. Identified commonly used IT tools</li> <li>1.2. Performed simple trouble-shooting with computer</li> <li>1.3. Performed typing on word processing software, saved and retrieved documents</li> <li>1.4. Performed data entry with spreadsheet</li> <li>1.5. Used email account for different online purposes</li> </ol>
2. Underpinning knowledge	<ol style="list-style-type: none"> <li>2.1. IT and IT tools</li> <li>2.2. Computer trouble-shooting</li> <li>2.3. Techniques to access internet</li> </ol>

### 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.

<b>3. Underpinning skills</b>	<b>3.1.</b> Demonstrating simple trouble-shooting with computer <b>3.2.</b> Demonstrating typing on word processing software <b>3.3.</b> Demonstrating data entry with spreadsheet <b>3.4.</b> Opening email account and using it for different purposes
<b>4. Underpinning attitudes</b>	<b>4.1.</b> Active on teamwork <b>4.2.</b> Prompt in carrying out activities <b>4.3.</b> Tidy and punctual <b>4.4.</b> Respectful of peers, subordinates and seniors in the workplace <b>4.5.</b> Concerned about proper use of computer and peripherals <b>4.6.</b> Sincere and honest concerning duties
<b>5. Resource implications</b>	The following resources must be provided: <b>5.1.</b> Workplace (simulated or actual) <b>5.2.</b> IT tools <b>5.3.</b> Computer/laptop/notebook <b>5.4.</b> Software <b>5.5.</b> Internet <b>5.6.</b> Projector <b>5.7.</b> Stationary <b>5.8.</b> Learning manual
<b>6. Methods of assessment</b>	Methods of assessment may include but is not limited to: <b>6.1.</b> Written test <b>6.2.</b> Demonstration <b>6.3.</b> Oral test <b>6.4.</b> Observation <b>6.5.</b> Portfolio
<b>7. Context of assessment</b>	<b>7.1.</b> Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency. <b>7.2.</b> Assessment must be done by a suitably qualified/certified assessor.

### Accreditation Requirements

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## Sector-specific Competencies

<b>Unit Title:</b>	Explore the history of Textile Sector
<b>Unit Code:</b>	SEIP-TEX-PPW-01-S
<b>Nominal Hours:</b>	16 hours
<b>Unit Descriptor:</b>	This unit covers the skills, knowledge and attitudes required to describe the basic concept of Textile Sector in Bangladesh. It specifically includes identifying the background of textile sector, identifying the main industries within the textile sector, identifying materials and machines used in weaving, identifying preparatory processing in weaving and, identifying prime local and export markets.
<b>Elements of Competency</b>	<b>Performance Criteria</b> ( <b><u>bold and underlined</u></b> terms are elaborated in the Range of Variables)
1. Identify the background of textile sector	1.1. The background of textile sector is identified and described. 1.2. <b><u>Steps of manufacturing process</u></b> are clearly identified. 1.3. Backward and forward linkages are identified.
2. Identify main industries within textile sector	2.1. Main industries of the textile sector are identified. 2.2. Importance of textile sector and main industries is explored and analysed.
3. Identify materials and machines used in weaving	3.1. Different types of <b><u>yarn</u></b> are identified. 3.2. Different types of <b><u>fabric</u></b> are identified. 3.3. Various <b><u>input and output packages</u></b> are identified. 3.4. Different types of <b><u>machine</u></b> are identified.
4. Identify preparatory process in weaving	4.1. Preparatory process in weaving is identified. 4.2. Preparatory process in weaving is explained.
5. Identify prime local and export markets	5.1. Prime <b><u>local markets</u></b> and <b><u>export markets</u></b> are identified. 5.2. Local and export markets are listed.

Range of Variables	
Variable	Range ( <i>may include but not limited to</i> )
1. Steps of manufacturing process	1.1. Spinning 1.2. Weaving 1.3. Dyeing 1.4. Printing 1.5. Finishing 1.6. Garments

<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> <i>(may include but not limited to)</i>
<b>3. Yarn</b>	<ul style="list-style-type: none"> <li>2.1. Cotton</li> <li>2.2. Polyester</li> <li>2.3. Blended (Cotton, polyester, tencel, flax, viscose, modal)</li> <li>2.4. Wool</li> <li>2.5. Silk</li> </ul>
<b>4. Fabric</b>	<ul style="list-style-type: none"> <li>3.1. Greige</li> <li>3.2. Grey/solid dyed</li> <li>3.3. Stripe</li> <li>3.4. Check</li> <li>3.5. Cross over</li> <li>3.6. Double cloth</li> <li>3.7. Terry</li> </ul>
<b>5. Input and output packages</b>	<ul style="list-style-type: none"> <li>4.1. Cone</li> <li>4.2. Chese</li> <li>4.3. Warper's beam</li> <li>4.4. Weaver's beam</li> <li>4.5. Sizing</li> <li>4.6. Weaving (loom)</li> </ul>
<b>6. Machines</b>	<ul style="list-style-type: none"> <li>5.1. Cone winding</li> <li>5.2. Warping: <ul style="list-style-type: none"> <li>5.2.1. Sectional warping</li> <li>5.2.2. Direct / High speed warping</li> </ul> </li> <li>5.3. Sizing</li> <li>5.4. Weaving (loom)</li> </ul>
<b>7. Local markets</b>	<ul style="list-style-type: none"> <li>6.1. Wet processing mills</li> <li>6.2. Wholesale market</li> <li>6.3. Retail market</li> </ul>
<b>8. Export markets</b>	<ul style="list-style-type: none"> <li>7.1. Europe</li> <li>7.2. United States</li> <li>7.3. Australia</li> </ul>

## 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.

<b>1. Critical aspects of competency</b>	Assessment must evidence that the candidate: <b>1.1.</b> Identified the background of textile sector <b>1.2.</b> Identified basic steps of manufacturing process <b>1.3.</b> Identified materials and machines used <b>1.4.</b> Identified preparatory process in weaving <b>1.5.</b> Identified prime local and export markets
<b>2. Underpinning knowledge</b>	<b>2.1.</b> Back ground of textile sector <b>2.2.</b> Steps of manufacturing process <b>2.3.</b> Common materials and machines <b>2.4.</b> Preparatory process in weaving <b>2.5.</b> Prime local and export markets
<b>3. Underpinning skills</b>	<b>3.1.</b> Describing the back ground of textile sector <b>3.2.</b> Identifying steps of manufacturing processing <b>3.3.</b> Identifying materials and machines <b>3.4.</b> Identifying and explaining preparatory process in weaving <b>3.5.</b> Identifying prime local and export markets
<b>4. Underpinning attitudes</b>	<b>4.1.</b> Eager to learn <b>4.2.</b> Patient and attentive <b>4.3.</b> Tidy and punctual <b>4.4.</b> Sincere and honest concerning duties
<b>5. Resource implications</b>	The following resources must be provided: <b>5.1.</b> Workplace (simulated or actual) <b>5.2.</b> Map/globe <b>5.3.</b> Projector <b>5.4.</b> Stationary <b>5.5.</b> Learning manual
<b>6. Methods of assessment</b>	Methods of assessment may include but is not limited to: <b>6.1.</b> Written test <b>6.2.</b> Oral test <b>6.3.</b> Observation <b>6.4.</b> Demonstration <b>6.5.</b> Portfolio
<b>7. Context of assessment</b>	<b>7.1.</b> Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency. <b>7.2.</b> Assessment must be done by a suitably qualified/certified assessor.

**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.

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<b>Unit Title:</b>	Use hand and power tools
<b>Unit Code:</b>	SEIP-TEX-PPW-02-S
<b>Nominal Hours:</b>	24 hours
<b>Unit Descriptor:</b>	This unit covers the skills, knowledge and attitudes required to use hand and power tools in the workplace. It specifically includes identifying and inspecting hand and power tools for usability, using and operating tools properly and safely, and cleaning and maintaining hand and power tools after use.
<b>Elements of Competency</b>	<b>Performance Criteria</b> ( <b><u>bold and underlined</u></b> terms are elaborated in the Range of Variables)
1. Identify and inspect hand and power tools	<p>1.1. Appropriate hand and power tools are identified.</p> <p>1.2. Application of hand and power tools is recognised.</p> <p>1.3. Usability of hand and power tools is checked and verified.</p>
2. Use hand tools properly and safely	<p>2.1. Appropriate <b><u>hand tools</u></b> are selected.</p> <p>2.2. Safety precautions are ensured before using hand tools.</p> <p>2.3. Unsafe or faulty hand tools are identified and marked for repair.</p> <p>2.4. <b><u>Measuring tools</u></b> are checked and calibrated before use.</p> <p>2.5. Use hand tools properly and safely to perform work activity.</p>
3. Operate power tools properly and safely	<p>3.1. Appropriate <b><u>power tools</u></b> are selected.</p> <p>3.2. Power supply outlet and electrical cord are inspected and confirmed safe for use in accordance with established workplace safety requirements.</p> <p>3.3. Safety precautions are ensured before using power tools in accordance with manufacturer's operating specification.</p> <p>3.4. Proper sequence of operation applied for using power tools.</p> <p>3.5. Unsafe or faulty power tools are identified and marked for repair.</p> <p>3.6. Operate power tools properly and safely to perform work activity.</p>
4. Clean and maintain hand and power tools	<p>4.1. Dust and foreign matter is removed from hand and power tools in accordance to workplace standards.</p> <p>4.2. Condition of hand and power tools is checked after use and reported.</p> <p>4.3. Appropriate lubricant is applied after use and prior to storage.</p> <p>4.4. Measuring tools are checked and calibrated after use.</p> <p>4.5. Defective hand and power tools are inspected and repaired or replaced.</p> <p>4.6. Hand and power tools are stored and secured in accordance with workplace requirements.</p>

<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> <i>(may include but not limited to)</i>
<b>1. Hand tools</b>	<ul style="list-style-type: none"> <li>1.1. Hacksaw</li> <li>1.2. Hammer</li> <li>1.3. Files</li> <li>1.4. Pliers</li> <li>1.5. Punches</li> <li>1.6. Screwdrivers</li> <li>1.7. Wrench box</li> <li>1.8. Hand tap</li> <li>1.9. Wire cutters</li> <li>1.10. Hand hacksaw</li> <li>1.11. Drill</li> <li>1.12. Grinder</li> <li>1.13. Dial gauge</li> <li>1.14. Spanner comb</li> <li>1.15. Spanner ring</li> <li>1.16. Socket ratchet set</li> <li>1.17. Easy opener</li> <li>1.18. Top roller adjust gauge</li> <li>1.19. Allen key</li> <li>1.20. Top roller adjust gauge</li> </ul>
<b>2. Power tools</b>	<ul style="list-style-type: none"> <li>2.1. Portable drilling machine</li> <li>2.2. Threading machine</li> <li>2.3. Saws</li> <li>2.4. Glue gun</li> <li>2.5. Soldering iron</li> <li>2.6. Grinders</li> </ul>
<b>3. Measuring tools</b>	<ul style="list-style-type: none"> <li>3.1. Measuring tape</li> <li>3.2. Steel tape</li> <li>3.3. Techo Meter</li> <li>3.4. Slide callipers</li> <li>3.5. Viscosity cup</li> <li>3.6. Refracto-meter</li> </ul>

**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.

<b>1. Critical aspects of competency</b>	Assessment must evidence that the candidate: <b>1.1.</b> Identified and selected appropriate hand and power tools for work to be performed <b>1.2.</b> Identified and used measuring and testing tools appropriate to work activity <b>1.3.</b> Followed safety precautions when using hand and power tools <b>1.4.</b> Operated power tools safely and pursuant to manufacturer's operating specification <b>1.5.</b> Performed cleaning and maintenance of hand and power tools after use and prior to storing
<b>2. Underpinning knowledge</b>	<b>2.1.</b> Information on types of hand and power tools, their functions and use <b>2.2.</b> Procedures for safely using hand and power tools
<b>3. Underpinning skills</b>	<b>3.1.</b> Identifying hand, power and measuring tools <b>3.2.</b> Following safety precautions when using hand, power and measuring tools <b>3.3.</b> Using hand and measuring tools correctly and safely in accordance with manufacturer's operating specification <b>3.4.</b> Operating power tools correctly and safely in accordance with manufacturer's operating specification <b>3.5.</b> Cleaning and maintaining hand and power tools after use <b>3.6.</b> Applying appropriate lubricant on hand and power tools after use and prior to storing
<b>4. Underpinning attitudes</b>	<b>4.1.</b> Prompt in carrying out activities <b>4.2.</b> Tidy and punctual <b>4.3.</b> Eager to learn <b>4.4.</b> Active on teamwork <b>4.5.</b> Sincere and honest concerning duties <b>4.6.</b> Concerned for proper use of tools <b>4.7.</b> Concerned about the work environment <b>4.8.</b> Committed to occupational health and safety practices <b>4.9.</b> Respectful of peers, subordinates and seniors in the workplace

## 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.

<b>5. Resource implications</b>	The following resources must be provided: <b>5.1.</b> Workplace (simulated or actual) <b>5.2.</b> Hand tools <b>5.3.</b> Power tools <b>5.4.</b> Measuring tools <b>5.5.</b> Personal protective equipment (PPE) <b>5.6.</b> Projector <b>5.7.</b> Stationary <b>5.8.</b> Learning manual
<b>6. Methods of assessment</b>	Methods of assessment may include but is not limited to: <b>6.1.</b> Written test <b>6.2.</b> Oral test <b>6.3.</b> Observation <b>6.4.</b> Demonstration <b>6.5.</b> Portfolio
<b>7. Context of assessment</b>	<b>7.1.</b> Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency. <b>7.2.</b> Assessment must be done by a suitably qualified/certified assessor.

### 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 NTVQF qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.



<b>Unit Title:</b>	Read and interpret sketches and drawings
<b>Unit Code:</b>	SEIP-TEX-PPW-03-S
<b>Nominal Hours:</b>	16 hours
<b>Unit Descriptor:</b>	This unit covers the skills, knowledge and attitudes required to read and interpret sketches and drawings. It specifically includes interpreting information and specifications, and reading and interpreting sketches and drawings.
<b>Elements of Competency</b>	<b>Performance Criteria</b> ( <b><u>bold and underlined</u></b> terms are elaborated in the Range of Variables)
1. Interpret information and specifications	<p>1.1. Appropriate <b><u>manuals</u></b> for work activity are identified and collected.</p> <p>1.2. Information and <b><u>specifications</u></b> in the manuals is interpreted and applied.</p>
2. Read and interpret sketches and drawings	<p>2.1. Relevant <b><u>sketches and drawings</u></b> are identified for job requirement.</p> <p>2.2. Key <b><u>terms and abbreviations</u></b> are identified and interpreted.</p> <p>2.3. <b><u>Signs and symbols</u></b> are identified and interpreted.</p> <p>2.4. Schedules, dimensions, sketches, drawings and specifications are correctly read and interpreted.</p>

<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> ( <i>may include but not limited to</i> )
1. Manuals	<p>1.1. Buyers specification</p> <p>1.2. Compliance</p> <p>1.3. Maintenance procedure</p> <p>1.4. Periodic maintenance</p> <p>1.5. Quality assurance</p> <p>1.6. Standard operating procedure (SOP)</p>
2. Sketches and drawings	<p>2.1. Technical</p> <p>2.2. Measurement</p> <p>2.3. Design</p>
3. Specifications	<p>3.1. Product</p> <p>3.2. Performance</p> <p>3.3. Method</p>
4. Terms and abbreviations	4.1. Refers to all terms and abbreviations associated with the Textile Sector
5. Signs and symbols	5.1. Includes all signs and symbols associated with the Textile Sector

## 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.

<b>1. Critical aspects of competency</b>	Assessment must evidence that the candidate: <b>1.1.</b> Identified information and specifications <b>1.2.</b> Read and interpreted sketches and drawings
<b>2. Underpinning knowledge</b>	<b>2.1.</b> Manuals <b>2.2.</b> Units of measurement <b>2.3.</b> Units of conversion <b>2.4.</b> Sketch, drawings and specifications
<b>3. Underpinning skills</b>	<b>3.1.</b> Reading and identifying information and specifications (from manual) <b>3.2.</b> Reading and interpreting sketches and drawings
<b>4. Underpinning attitudes</b>	<b>4.1.</b> Prompt in carrying out activities <b>4.2.</b> Tidy and punctual <b>4.3.</b> Eager to learn <b>4.4.</b> Active on teamwork <b>4.5.</b> Sincere and honest concerning duties <b>4.6.</b> Eager to learn <b>4.7.</b> Concerned about proper use of computer and peripherals
<b>5. Resource implications</b>	The following resources must be provided: <b>5.1.</b> Workplace (simulated or actual) <b>5.2.</b> Computer/laptop/notebook <b>5.3.</b> Software <b>5.4.</b> Projector <b>5.5.</b> Stationary <b>5.6.</b> Learning manual
<b>6. Methods of assessment</b>	Methods of assessment may include but is not limited to: <b>6.1.</b> Written test <b>6.2.</b> Oral test <b>6.3.</b> Observation <b>6.4.</b> Demonstration <b>6.5.</b> Portfolio
<b>7. Context of assessment</b>	<b>7.1.</b> Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency. <b>7.2.</b> Assessment must be done by a suitably qualified/certified assessor.

**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.

**Accreditation Requirements**

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## Occupation-specific Competencies

<b>Unit Title:</b>	Perform winding operations
<b>Unit Code:</b>	SEIP-TEX-PPW-01-O
<b>Nominal Hours:</b>	32 hours
<b>Unit Descriptor:</b>	This unit covers the skills, knowledge and attitudes required to perform winding operations. It specifically includes identifying machine and machine parts, identifying production process, performing creeling, feeding and knotting, operating the machine, cleaning and maintaining the machine, and disposing of waste material.
<b>Elements of Competency</b>	<b>Performance Criteria</b> ( <b><u>bold and underlined</u></b> terms are elaborated in the Range of Variables)
1. Identify machine and machine parts	<p>1.1. Machine and its functions are identified and described.</p> <p>1.2. <b><u>Main parts</u></b> of machine are identified.</p> <p>1.3. Functions of main parts of machine are explained.</p>
2. Identify production process	<p>2.1. <b><u>Production process</u></b> is identified and explained.</p> <p>2.2. Steps of production process are interpreted.</p>
3. Perform creeling, feeding and knotting	<p>3.1. Yarn packages (bobbin or cone) are identified and collected.</p> <p>3.2. Yarn packages are checked for suitability.</p> <p>3.3. Bobbins or cones are creeled as per standard operating procedure.</p> <p>3.4. Yarns are correctly fed into winding package.</p> <p>3.5. Yarns are knotted when required.</p>
4. Operate winding machine	<p>4.1. <b><u>Hand tools</u></b> are identified and selected as per job requirement.</p> <p>4.2. <b><u>Control points</u></b> are identified.</p> <p>4.3. Winding machine is operated as per standard operating procedure.</p> <p>4.4. Packages are doffed as per standard operating procedure.</p> <p>4.5. <b><u>Block of materials</u></b> are identified and separated.</p>
5. Clean and maintain machine	<p>5.1. Machine parts are cleaned as per manufacturer instructions and pursuant to schedule.</p> <p>5.2. Winding drum is cleaned periodically as instructed.</p>
6. Dispose of waste material	<p>6.1. Waste material from machine is identified.</p> <p>6.2. Waste material is separated and disposed of as per standard operating procedure.</p>

<b>Range of Variables</b>	
<b>Variable</b>	<b>Range (may include but not limited to)</b>
1. Main parts	1.1. Creel 1.2. Yarn tensioner 1.3. Cradle 1.4. Winding drum 1.5. Knotter/splicer
2. Production process	2.1. Creeling 2.2. Feeding 2.3. Knotting 2.4. Doffing 2.5. Starting and stopping 2.6. Braking
3. Hand tools	3.1. Spanner 3.2. Wrench box 3.3. Screwdriver 3.4. Slide calliper
4. Control points	4.1. Traversing motion 4.2. Drum head 4.3. Brake system 4.4. Stop device 4.5. Breakage indicator 4.6. Machine speed
5. Block of materials	5.1. "Lots" of materials of different count 5.2. "Lot" of different fibres

<b>Evidence Guide</b>	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	Assessment must evidence that the candidate: <ol style="list-style-type: none"> <li>1.1. Identified winding machine, its main parts and functions</li> <li>1.2. Identified production process</li> <li>1.3. Carried out creeling, feeding and knotting</li> <li>1.4. Operated winding machine</li> <li>1.5. Cleaned and maintained machine parts</li> </ol>

**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.

<b>2. Underpinning knowledge</b>	<ul style="list-style-type: none"><li>2.1. Winding machine and main parts</li><li>2.2. Functions of winding machine and its main parts</li><li>2.3. Production process of machine</li><li>2.4. Creeling, feeding and knotting</li><li>2.5. Cleaning and maintenance procedures</li></ul>
<b>3. Underpinning skills</b>	<ul style="list-style-type: none"><li>3.1. Identifying and collecting yarn packages</li><li>3.2. Performing creeling, feeding and knotting</li><li>3.3. Operating winding machine</li><li>3.4. Cleaning and maintaining winding machine</li><li>3.5. Disposing of waste material</li></ul>
<b>4. Underpinning attitudes</b>	<ul style="list-style-type: none"><li>4.1. Prompt in carrying out activities</li><li>4.2. Tidy and punctual</li><li>4.3. Eager to learn</li><li>4.4. Sincere and honest concerning duties</li><li>4.5. Active on teamwork</li><li>4.6. Concerned for proper use of tools</li><li>4.7. Concerned about the work environment</li><li>4.8. Committed to occupational health and safety practices</li></ul>
<b>5. Resource implications</b>	<p>The following resources must be provided:</p> <ul style="list-style-type: none"><li>5.1. Workplace (simulated or actual)</li><li>5.2. Personal protective equipment (PPE)</li><li>5.3. Winding machine</li><li>5.4. Tools and equipment</li><li>5.5. Yarn packages</li><li>5.6. Materials</li><li>5.7. Storage area</li><li>5.8. Stationary</li><li>5.9. Learning manual</li></ul>
<b>6. Methods of assessment</b>	<p>Methods of assessment may include but is not limited to:</p> <ul style="list-style-type: none"><li>6.1. Written test</li><li>6.2. Oral test</li><li>6.3. Observation</li><li>6.4. Demonstration</li><li>6.5. Portfolio</li></ul>
<b>7. Context of assessment</b>	<ul style="list-style-type: none"><li>7.1. Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency.</li><li>7.2. Assessment must be done by a suitably qualified/certified assessor.</li></ul>

**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.

**Accreditation Requirements**

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<b>Unit Title:</b>	Perform direct warping operations
<b>Unit Code:</b>	SEIP-TEX-PPW-02-O
<b>Nominal Hours:</b>	56 hours
<b>Unit Descriptor:</b>	This unit covers the skills, knowledge and attitudes required to perform direct warping operations. It specifically includes identifying machine and machine parts, identifying production process, performing creeling, feeding, knotting, operating direct warping machine, cleaning and maintaining the machine, and disposing of waste material.
<b>Elements of Competency</b>	<b>Performance Criteria</b> ( <b><u>bold and underlined</u></b> terms are elaborated in the Range of Variables)
1. Identify machine and machine parts	<p>1.1. Machine and its functions are identified and described.</p> <p>1.2. <b><u>Main parts</u></b> of machine are identified.</p> <p>1.3. Functions of main parts of machine are explained.</p>
2. Identify production process	<p>2.1. <b><u>Types of warping</u></b> are identified</p> <p>2.2. <b><u>Production process</u></b> is identified and explained.</p> <p>2.3. Steps of production process are interpreted.</p>
3. Perform creeling, feeding and knotting	<p>3.1. Yarn packages (cone) are identified and collected.</p> <p>3.2. Cones are creeled as per standard operating procedure.</p> <p>3.3. Yarns are correctly fed into warpers beam.</p> <p>3.4. Yarns are knotted when required.</p>
4. Operate direct warping machine	<p>4.1. <b><u>Hand tools</u></b> are identified and selected as per job requirement.</p> <p>4.2. <b><u>Control points</u></b> are identified.</p> <p>4.3. Creel, reed and head stock are correctly aligned.</p> <p>4.4. Starting and stopping of machine is performed as per standard operating procedure.</p> <p>4.5. Warper's beam is doffed as per standard operating procedure.</p>
5. Clean and maintain machine	<p>5.1. Machine parts are cleaned as per manufacturer instructions and pursuant to schedule.</p> <p>5.2. Warpers beam is cleaned periodically as instructed.</p>
6. Dispose of waste material	<p>6.1. Waste material from machine is identified.</p> <p>6.2. Waste material is separated and disposed of as per standard operating procedure.</p>



Range of Variables	
Variable	Range (may include but not limited to)
1. Main parts	1.1. Creel 1.2. Yarn tensioner 1.3. Yarn guide 1.4. Adjustable reed 1.5. Head stock 1.6. Sensor
2. Types of warping	2.1. Sectional 2.2. Direct 2.3. High speed 2.4. Ball
3. Production process	3.1. Creeling 3.2. Feeding 3.3. Knotting 3.4. Doffing 3.5. Starting and stopping 3.6. Braking
4. Hand tools	4.1. Spanner 4.2. Wrench box 4.3. Screwdriver 4.4. Slide calliper
5. Control points	5.1. Winding speed 5.2. Brake system 5.3. Reed 5.4. Stop device 5.5. Breakage indicator

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	Assessment must evidence that the candidate: <ol style="list-style-type: none"> <li>1.1. Identified machine, its main parts and functions</li> <li>1.2. Identified production process</li> <li>1.3. Carried out creeling, feeding and knotting</li> <li>1.4. Operated direct warping machine</li> <li>1.5. Carried out doffing</li> <li>1.6. Cleaned and maintained machine parts</li> </ol>

## 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.

<b>2. Underpinning knowledge</b>	<ul style="list-style-type: none"><li>2.1. Direct warping machine and main parts</li><li>2.2. Functions of direct warping machine and its main parts</li><li>2.3. Production process of machine</li><li>2.4. Creeling, feeding and knotting</li><li>2.5. Cleaning and maintenance procedures</li></ul>
<b>3. Underpinning skills</b>	<ul style="list-style-type: none"><li>3.1. Identifying and collecting yarn packages</li><li>3.2. Performing creeling, feeding and knotting</li><li>3.3. Operating direct warping machine</li><li>3.4. Carrying out doffing of the packages</li><li>3.5. Cleaning and maintaining direct warping machine</li><li>3.6. Disposing of waste material</li></ul>
<b>4. Underpinning attitudes</b>	<ul style="list-style-type: none"><li>4.1. Eager to learn</li><li>4.2. Tidy and punctual</li><li>4.3. Sincere and honest concerning duties</li><li>4.4. Prompt in carrying out activities</li><li>4.5. Active on teamwork</li><li>4.6. Concerned for working environment</li><li>4.7. Concerned for proper use of tools</li><li>4.8. Committed to occupational health and safety practices</li></ul>
<b>5. Resource implications</b>	<p>The following resources must be provided:</p> <ul style="list-style-type: none"><li>5.1. Workplace (simulated or actual)</li><li>5.2. Personal protective equipment (PPE)</li><li>5.3. Direct warping machine</li><li>5.4. Tools and equipment</li><li>5.5. Yarn packages</li><li>5.6. Materials</li><li>5.7. Storage area</li><li>5.8. Stationary</li><li>5.9. Learning manual</li></ul>
<b>6. Methods of assessment</b>	<p>Methods of assessment may include but is not limited to:</p> <ul style="list-style-type: none"><li>6.1. Written test</li><li>6.2. Oral test</li><li>6.3. Observation</li><li>6.4. Demonstration</li><li>6.5. Portfolio</li></ul>

**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.

**7. Context of assessment**

- 7.1.** Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency.
- 7.2.** Assessment must be done by a suitably qualified/certified assessor.

**Accreditation Requirements**

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<b>Unit Title:</b>	Perform sectional warping operations
<b>Unit Code:</b>	SEIP-TEX-PPW-03-O
<b>Nominal Hours:</b>	80 hours
<b>Unit Descriptor:</b>	This unit covers the skills, knowledge and attitudes required to perform sectional warping operations. It specifically includes identifying machine and machine parts, identifying production process, performing creeling, feeding, knotting, operating sectional warping machine, cleaning and maintaining the machine, and disposing of waste material.
<b>Elements of Competency</b>	<b>Performance Criteria</b> ( <b><u>bold and underlined</u></b> terms are elaborated in the Range of Variables)
1. Identify machine and machine parts	<p>1.1. Machine and its functions are identified and described.</p> <p>1.2. <b><u>Main parts</u></b> of machine are identified.</p> <p>1.3. Functions of main parts of machine are explained.</p>
2. Identify production process	<p>2.1. <b><u>Production process</u></b> is identified and explained.</p> <p>2.2. Steps of production process are interpreted.</p>
3. Perform creeling, feeding and knotting	<p>3.1. Yarn packages (cone) are identified and collected.</p> <p>3.2. Cones are creeled as per pattern paper.</p> <p>3.3. Yarns are correctly fed into leasing reed and wooden drum.</p> <p>3.4. Yarns are knotted when required.</p>
4. Operate sectional warping machine	<p>4.1. <b><u>Hand tools</u></b> are identified and selected as per job requirement.</p> <p>4.2. <b><u>Control points for machine</u></b> are identified.</p> <p>4.3. <b><u>Control points for warping</u></b> are identified.</p> <p>4.4. Creel, reed and head stock are correctly aligned.</p> <p>4.5. Sectional warping machine is operated as per standard operating procedure.</p> <p>4.6. Creel and head stock are adjusted for each section.</p> <p>4.7. Leasing is performed for each section.</p> <p>4.8. Warp yarns are transferred to the warpers beam as per standard operating procedure.</p> <p>4.9. Warpers beam is doffed as per standard operating procedure.</p>
5. Clean and maintain machine	<p>5.1. Machine parts are cleaned as per manufacturer instructions and pursuant to schedule.</p> <p>5.2. Warpers beam is cleaned periodically as instructed.</p>
6. Dispose of waste material	<p>6.1. Waste material from machine is identified.</p> <p>6.2. Waste material is separated and disposed of as per standard operating procedure.</p>

<b>Range of Variables</b>	
<b>Variable</b>	<b>Range (may include but not limited to)</b>
1. Main parts	1.1. Creel 1.2. Yarn tensioner 1.3. Yarn guide 1.4. Adjustable reed 1.5. Headstock 1.6. Sensor
2. Production process	2.1. Creeling 2.2. Feeding 2.3. Knotting 2.4. Starting and stopping 2.5. Braking 2.6. Transferring 2.7. Doffing
3. Hand tools	3.1. Spanner 3.2. Wrench box 3.3. Screwdriver 3.4. Slide calliper
4. Control points (machine)	4.1. Winding speed 4.2. Brake system 4.3. Reed adjustment 4.4. Stop device 4.5. Breakage indicator
5. Control points (warping)	5.1. Number of sections 5.2. Width of each section 5.3. Number of warp in each section 5.4. Number of weave repeat in each section

<b>Evidence Guide</b>	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	Assessment must evidence that the candidate: <ol style="list-style-type: none"> <li>1.1. Identified machine, its main parts and functions</li> <li>1.2. Identified production process</li> <li>1.3. Carried out creeling, feeding and knotting</li> <li>1.4. Operated sectional warping machine</li> <li>1.5. Carried out leasing and doffing</li> <li>1.6. Cleaned and maintained machine parts</li> </ol>

## 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.

<b>2. Underpinning knowledge</b>	<ul style="list-style-type: none"><li>2.1. Sectional warping machine and main parts</li><li>2.2. Functions of sectional warping machine and its main parts</li><li>2.3. Creeling, feeding and knotting</li><li>2.4. Leasing and doffing</li><li>2.1. Cleaning and maintenance procedures</li></ul>
<b>3. Underpinning skills</b>	<ul style="list-style-type: none"><li>3.1. Identifying and collecting yarn packages</li><li>3.2. Performing creeling, feeding and knotting</li><li>3.3. Operating sectional warping machine</li><li>3.4. Carrying out leasing of each section</li><li>3.5. Transferring warp yarns</li><li>3.6. Carrying out doffing of packages</li><li>3.7. Cleaning and maintaining sectional warping machine</li><li>3.8. Disposing of waste material</li></ul>
<b>4. Underpinning attitudes</b>	<ul style="list-style-type: none"><li>4.1. Eager to learn</li><li>4.2. Tidy and punctual</li><li>4.3. Sincere and honest concerning duties</li><li>4.4. Prompt in carrying out activities</li><li>4.5. Active on teamwork</li><li>4.6. Concerned for working environment</li><li>4.7. Concerned for proper use of tools</li><li>4.8. Committed to occupational health and safety practices</li></ul>
<b>5. Resource implications</b>	<p>The following resources must be provided:</p> <ul style="list-style-type: none"><li>5.1. Workplace (simulated or actual)</li><li>5.2. Personal protective equipment (PPE)</li><li>5.3. Sectional warping machine</li><li>5.4. Tools and equipment</li><li>5.5. Yarn packages</li><li>5.6. Materials</li><li>5.7. Storage area</li><li>5.8. Stationary</li><li>5.9. Learning manual</li></ul>
<b>6. Methods of assessment</b>	<p>Methods of assessment may include but is not limited to:</p> <ul style="list-style-type: none"><li>6.1. Written test</li><li>6.2. Oral test</li><li>6.3. Observation</li><li>6.4. Demonstration</li><li>6.5. Portfolio</li></ul>

**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.

**7. Context of assessment**

**7.1.** Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency.

**7.2.** Assessment must be done by a suitably qualified/certified assessor.

**Accreditation Requirements**

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<b>Unit Title:</b>	Perform sizing operations
<b>Unit Code:</b>	SEIP-TEX-PPW-04-O
<b>Nominal Hours:</b>	96 hours
<b>Unit Descriptor:</b>	This unit covers the skills, knowledge and attitudes required to perform sizing operations. It specifically includes identifying the machine, zones and functions, identifying production process, identifying sizing ingredients, performing size cooking, performing creeling, feeding knotting, operating the sizing machine, cleaning and maintaining the machine, and disposing of waste material.
<b>Elements of Competency</b>	<b>Performance Criteria</b> ( <b><u>bold and underlined</u></b> terms are elaborated in the Range of Variables)
1. Identify machine, zones and functions	<p>1.1. Machine and its functions are identified and described.</p> <p>1.2. <b><u>Main zones</u></b> of machine are identified.</p> <p>1.3. Functions of main parts of machine are explained.</p>
2. Identify production process	<p>2.1. <b><u>Production process</u></b> is identified and explained.</p> <p>2.2. Steps of production process are interpreted.</p>
3. Identify sizing ingredients	<p>3.1. Different <b><u>size ingredients</u></b> are identified.</p> <p>3.2. Functions of ingredients are identified and explained.</p> <p>3.3. Application process of ingredients is explained.</p>
4. Perform size cooking	<p>4.1. Size ingredients are identified and selected as per job requirement.</p> <p>4.2. <b><u>Control points (cooking)</u></b> are identified.</p> <p>4.3. Ingredients are cooked and stored as per standard operating procedure.</p> <p>4.4. Size solution is pumped into the size bath, when required.</p>
5. Perform creeling, feeding and knotting	<p>5.1. Warper's beams are identified and collected.</p> <p>5.2. Warper's beams are creeled as per standard operating procedure.</p> <p>5.3. Yarns are fed into weavers beam as per standard operating procedure.</p> <p>5.4. Yarns are knotted when required.</p>
6. Operate sizing machine	<p>6.1. <b><u>Hand tools</u></b> are identified and selected as per job requirement.</p> <p>6.2. <b><u>Control points (machine operation)</u></b> are identified.</p> <p>6.3. Reed is adjusted as necessary.</p> <p>6.4. Sizing machine is operated as per standard operating procedure.</p> <p>6.5. Leasing is performed as per standard operating procedure.</p> <p>6.6. Warper's beam is doffed as per standard operating procedure.</p>



7. Clean and maintain machine	7.1. Machine parts are cleaned as per manufacturer instructions and pursuant to schedule. 7.2. Winding drum is cleaned periodically as instructed.
8. Dispose of waste material	8.1. Waste material from machine is identified. 8.2. Waste material is separated and disposed of as per standard operating procedure.

<b>Range of Variables</b>	
<b>Variable</b>	<b>Range (may include but not limited to)</b>
1. Main zones	1.1. Creeling 1.2. Sizing 1.3. Drying 1.4. Leasing 1.5. Measuring 1.6. Winding
2. Production process	2.1. Creeling 2.2. Feeding 2.3. Knotting 2.4. Starting and stopping 2.5. Braking 2.6. Doffing
3. Size ingredients	3.1. Starch 3.2. Penetrose 3.3. Tropica 3.4. Acrylic binder 3.5. Wax 3.6. Polyvinyl alcohol (PVA) 3.7. Water
4. Control points (cooking)	4.1. Time 4.2. Temperature 4.3. Stirring speed 4.4. Viscosity 4.5. Capacity
5. Hand tools	5.1. Spanner 5.2. Wrench box 5.3. Screwdriver 5.4. Slide calliper

<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> <i>(may include but not limited to)</i>
6. Control points (machine operation)	6.1. Size applied temperature 6.2. Squeezing roller pressure 6.3. Yarn speed 6.4. Drying temperature 6.5. Reed 6.6. Stop device 6.7. Hydraulic/pneumatic brake system

<b>Evidence Guide</b>	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	Assessment must evidence that the candidate: <ol style="list-style-type: none"> <li>1.1. Identified machine, its main parts and functions</li> <li>1.2. Identified production process</li> <li>1.3. Collected and mixed size ingredients</li> <li>1.4. Cooked and stored size solution</li> <li>1.5. Carried out creeling, feeding and knotting</li> <li>1.6. Operated sizing machine</li> <li>1.7. Carried out leasing and doffing</li> <li>1.8. Cleaned and maintained machine parts</li> </ol>
2. Underpinning knowledge	<ol style="list-style-type: none"> <li>2.1. Sizing machine and main zones</li> <li>2.2. Functions of sizing machine and its main parts</li> <li>2.3. Production process of machine</li> <li>2.4. Sizing ingredients</li> <li>2.5. Creeling, feeding and knotting</li> <li>2.6. Cleaning and maintenance procedures</li> </ol>
3. Underpinning skills	<ol style="list-style-type: none"> <li>3.1. Identifying and collecting size ingredients</li> <li>3.2. Carrying out mixing and size cooking</li> <li>3.3. Performing creeling, feeding and knotting</li> <li>3.4. Storing and pumping size solution (when required)</li> <li>3.5. Operating sizing machine</li> <li>3.6. Carrying out leasing and doffing</li> <li>3.7. Cleaning and maintaining sizing machine</li> <li>3.8. Disposing of waste material</li> </ol>

## 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.

<b>4. Underpinning attitudes</b>	<ul style="list-style-type: none"><li>4.1. Eager to learn</li><li>4.2. Tidy and punctual</li><li>4.3. Sincere and honest concerning duties</li><li>4.4. Prompt in carrying out activities</li><li>4.5. Active on teamwork</li><li>4.6. Concerned for working environment</li><li>4.7. Concerned for proper use of tools</li><li>4.8. Committed to occupational health and safety practices</li></ul>
<b>5. Resource implications</b>	The following resources must be provided: <ul style="list-style-type: none"><li>5.1. Workplace (simulated or actual)</li><li>5.2. Personal protective equipment (PPE)</li><li>5.3. Sizing machine</li><li>5.4. Tools and equipment</li><li>5.5. Size ingredients</li><li>5.6. Materials</li><li>5.7. Storage area</li><li>5.8. Stationary</li><li>5.9. Learning manual</li></ul>
<b>6. Methods of assessment</b>	Methods of assessment may include but is not limited to: <ul style="list-style-type: none"><li>6.1. Written test</li><li>6.2. Oral test</li><li>6.3. Observation</li><li>6.4. Demonstration</li><li>6.5. Portfolio</li></ul>
<b>7. Context of assessment</b>	<ul style="list-style-type: none"><li>7.1. Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency.</li><li>7.2. Assessment must be done by a suitably qualified/certified assessor.</li></ul>

## Accreditation Requirements

Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any NTVQF qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.