



# Skills for Employment Investment Program (SEIP)

## COMPETENCY STANDARD FOR BASIC TECHNIQUES OF YARN MANUFACTURING *(TEXTILE SECTOR)*

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

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The Competency Standard for Basic Techniques of Yarn Manufacturing 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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## Table of Contents

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<b>Introduction</b>	<b>4</b>
<b>Overview</b>	<b>5</b>
Experts Involved	6
Development Workshop	6
Validation Workshop	7
<b>Competency Chart</b>	<b>8</b>
A. Generic (basic) Competencies (40 hours)	8
B. Sector-specific (common) Competencies (40 hours)	8
C. Occupation-specific (core) Competencies (280 hours)	8
<b>Units and Elements Table</b>	<b>11</b>
A. Generic (basic) Competencies	11
B. Sector-specific (common) Competencies	122
C. Occupation-specific (core) Competencies	122
<b>Competency Standard</b>	<b>14</b>
A: Generic (basic) Competencies	14
B: Sector-specific (common) Competencies	29
C: Occupation-specific (core) Competencies	38

## 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

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 28 January and concluded with a validation workshop with working group on 11 April 2018.

### Experts Involved

Industry and subject-matter experts who provided their valuable inputs to develop this competency standard (January – April 2018):

Name	Organisation	Designation
Engr. Mozaffar Hossain	SIM Group	Managing Director
Mr. Masud Rana	Asia Composite Mills Limited	Managing Director
Prof. Dr. Hosne Ara Begum	Bangladesh University of Textiles (BuTex)	Head - Department of Yarn Engineering
Mr. Abu Rayhan Albeeroonee	BTMA- SEIP	Chief Coordinator
Engr. AKM Mozammel Hoque	Asia Composite Mills Limited	Director Operation
Engr. Md. Ataur Rahman	Maksons Spinning Mills Limited	Deputy General Manager & Factory Head
Engr. Kazi Zahirul Islam	Asia Composite Mills Limited	General Manager (Quality & Planning)
David King	British Council - SD03	Team Leader
Shilpi Akter	British Council - SD03	National Subject Matter Consultant - Textile

### Development Workshop

Competency standard development workshop participants (22 March 2018):

Name	Organisation	Designation
Syed Nasir Ershad	SEIP	AEPD (Public1)
Md. Ahsan Habib	SEIP	TVET Specialist
Mr Mohiuzzaman	SEIP	Course Specialist
Mr. Abu Rayhan Albeeroonee	BTMA- SEIP	Chief Coordinator
Engr. Kazi Zahirul Islam	Asia Composite Mills Limited	General Manager (Quality & Planning)
Dr.Md. Shah Alam Majumder	BTEB	Specialist (Course Accreditation)
Md. Abdur Razzaque	BTEB	Specialist-1 (Competency Standards)
Md. Matiar Rahman	BTB	Principal

Name	Organisation	Designation
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Prahalad Acharjee	Maksons Spinning Mills Limited	Senior Manager and Trainer
David King	British Council - SD03	Team Leader
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### Validation Workshop

Competency standard validation workshop participants (11 April 2018):

Name	Organisation	Designation
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Md. Ahsan Habib	SEIP	TVET Specialist
Mr Mohiuzzaman	SEIP	Course Specialist
Mr. Masud Rana	Asia Composite Mills Limited	Managing Director
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Md. Matiar Rahman	BTB	Principal
S.M.Ashique	NITER (BTMA-SEIP)	Lecturer (External Assessor)
Prahalad Acharjee	Maksons Spinning Mills Limited	Senior Manager and Trainer
David King	British Council - SD03	Team Leader
Shilpi Akter	British Council - SD03	National Subject Matter Consultant - Textile

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.

## Competency Chart

Units of Competency	Elements		
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### A. Generic (basic) Competencies (40 hours)

Use basic mathematical concepts SEIP-TEX-SPN-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-SPN-02-G	Identify OHS policies and procedures	Apply personal health and safety practices	Report hazards and risks
	Respond to emergencies		
Carry out workplace interaction SEIP-TEX-SPN-03-G	Interpret workplace communication and etiquette	Read and understand workplace documents	Participate in workplace meetings and discussions
	Practice professional ethics at work		
Operate in a team environment SEIP-TEX-SPN-04-G	Identify team goals and work processes	Identify own role and responsibilities within team	Communicate and co-operate with team members
	Practice problem solving within the team		
Apply basic IT skills SEIP-TEX-SPN-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		

### B. Sector-specific (common) Competencies (40 hours)

Explore the history of Textile Sector SEIP-TEX-SPN-01-S	Examine the background of textile sector	Identify prime local and export markets
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Use hand and power tools SEIP-TEX-SPN-02-S	Identify and inspect hand and power tools	Use hand tools properly and safely	Operate power tools properly and safely
	Clean and maintain hand and power tools		

Read and interpret sketches and drawings SEIP-TEX-SPN-03-S	Identify information and specifications	Read and interpret sketches and drawings
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### C. Occupation-specific (core) Competencies (280 hours)

Interpret the basics of yarn manufacturing SEIP-TEX-SPN-01-O	Understand yarn manufacturing process	Identify raw materials	Identify tools, equipment and machines
	Interpret technical terms		

Operate blow room machine SEIP-TEX-SPN-02-O	Carry out bale opening operation	Perform cleaning operation	Operate blow room line machine
	Carry out blending of different fibres	Dispose of waste material	

Prepare materials for spinning SEIP-TEX-SPN-03-O	Operate the machine	Perform production of sliver and lap	Clean the machine
	Dispose of waste material		

Perform spinning operation SEIP-TEX-SPN-04-O	Handle lap trolley	Operate the machine	Perform feeding materials and piecing
	Clean the machine, cans and spools	Dispose of waste material	

Perform spinning and finishing SEIP-TEX-SPN-05-O	Operate the machine	Perform feeding, creeling and piecing	Perform doffing operation
	Clean the machines and packages	Dispose of waste material	

Carry out quality control of materials SEIP-TEX-SPN-06-O	Identify spinning accessories	Identify fibre and yarn faults	Test the quality of the material
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## Units and Elements Table

### A. Generic (basic) Competencies

Code	Unit of Competency	Elements of Competency	Duration (hours)
SEIP-TEX-SPN-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 calculation.</li> </ol>	8
SEIP-TEX-SPN-02-S	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-SPN-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-SPN-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-SPN-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>

## B. Sector-specific (common) Competencies

Code	Unit of Competency	Elements of Competency	Duration (hours)
SEIP-TEX-SPN-01-S	Explore the history of textile sector	<ol style="list-style-type: none"> <li>1. Examine the background of textile sector.</li> <li>2. Identify prime local and export markets.</li> </ol>	8
SEIP-TEX-SPN-02-S	Use hand tools 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 tools and power tools.</li> </ol>	24
SEIP-TEX-SPN-03-S	Read and interpret sketches and drawings	<ol style="list-style-type: none"> <li>1. Identify information and specifications.</li> <li>2. Read and interpret sketches and drawings.</li> </ol>	8
<b>Total Hours</b>			<b>40</b>

## C. Occupation-specific (core) Competencies

Code	Unit of Competency	Elements of Competency	Duration (hours)
SEIP-TEX-SPN-01-O	Interpret the basics of yarn manufacturing	<ol style="list-style-type: none"> <li>1. Understand yarn manufacturing processes.</li> <li>2. Identify raw materials.</li> <li>3. Identify tools, equipment and machines.</li> <li>4. Interpret technical terms.</li> </ol>	24
SEIP-TEX-SPN-02-O	Operate blow room machine	<ol style="list-style-type: none"> <li>1. Carry out bale opening operation.</li> <li>2. Perform cleaning operation.</li> <li>3. Operate the blow room line machine.</li> <li>4. Carry out blending of different fibres.</li> <li>5. Dispose of waste material.</li> </ol>	56
SEIP-TEX-SPN-03-O	Prepare materials for spinning	<ol style="list-style-type: none"> <li>1. Operate the machine.</li> <li>2. Perform production of sliver and lap.</li> <li>3. Clean the machine.</li> <li>4. Dispose of waste material.</li> </ol>	56
SEIP-TEX-SPN-04-O	Perform spinning operation	<ol style="list-style-type: none"> <li>1. Handle lap trolley.</li> <li>2. Operate the machine.</li> <li>3. Perform feeding of materials and piecing.</li> <li>4. Clean the machine, cans and spools.</li> </ol>	56

Code	Unit of Competency	Elements of Competency	Duration (hours)
		5. Dispose of waste material.	
SEIP-TEX-SPN-05-O	Perform spinning and finishing	<ol style="list-style-type: none"> <li>1. Operate the machine.</li> <li>2. Perform feeding, creeling and piecing.</li> <li>3. Perform doffing operation.</li> <li>4. Clean the machines and packages.</li> <li>5. Dispose of waste material.</li> </ol>	64
SEIP-TEX-SPN-06-O	Carry out quality control of material	<ol style="list-style-type: none"> <li>1. Identify spinning accessories.</li> <li>2. Identify fibre and yarn faults.</li> <li>3. Test the quality of the material.</li> </ol>	24
<b>Total Hours</b>			<b>280</b>

## Competency Standard

### A: Generic (basic) Competencies

<b>Unit of Competency:</b> Use basic mathematical concepts	<b>Nominal Duration:</b> 8 hours	<b>Unit Code:</b> SEIP-TEX-SPN-01-G
<b>Unit Descriptor:</b> This unit covers the skills, knowledge, and attitudes required to perform computations using basic mathematical concepts at workplace. It specifically includes identifying general calculation requirements, selecting appropriate mathematical method/concept, form and solve mathematical problems at workplace using appropriate tools and instruments.		

### Elements and Performance Criteria

Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables.

Elements of Competency	Performance Criteria
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/density 1.6. Capacity 1.7. Time 1.8. Temperature 1.9. Material/data usage 1.10. Speed 1.11. Costing

Variable	Range ( <i>may include but not limited to</i> )
2. Workplace information	2.1. Workplace/floor environment 2.2. Design sheet 2.3. Working chart/drawing 2.4. Verbal instructions 2.5. Specification sheet 2.6. Standard operating procedure (SOP) 2.7. 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

Curricula Content Guide	
1. Underpinning knowledge	1.1. Numerical concepts 1.2. Basic mathematical methods such as addition, subtraction, multiplication and division and percentage 1.3. Mathematical language, symbols and terminology 1.4. Measuring units
2. Underpinning skills	2.1. Construct simple problems with workplace information 2.2. Solve problems using appropriate method and instruments 2.3. Use appropriate tools and instruments.
3. Underpinning attitudes	3.1 Prompt in carrying out activities 3.2 Tidy and punctual 3.3 Respectful of peers, subordinates and seniors in the workplace 3.4 Safely use tools and equipment 3.5 Sincere and honest concerning duties

### Curricula Content Guide

#### 4. Resource implications

The following resources must be provided:

- 4.1. Work place (simulated or actual)
- 4.2. Calculator
- 4.3. Cell phone
- 4.4. Computer
- 4.5. Measuring tape
- 4.6. Ruler
- 4.7. Stationary
- 4.8. Learning manual

### Assessment Evidence Guide

#### 1. Critical aspects of competency

Assessment must evidence that the candidate:

- 1.1. identified calculation requirements from workplace information
- 1.2. selected appropriate method to carry out the calculation requirements
- 1.3. completed calculations using appropriate tools and instruments

#### 2. Methods of assessment

Methods of assessment may include but is not limited to:

- 2.1. written test
- 2.2. oral test
- 2.3. observation
- 2.4. demonstration
- 2.5. portfolio

#### 3. Context of assessment

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



<b>Unit of Competency:</b> Apply occupational health and safety (OHS) in the workplace	<b>Nominal Duration:</b> 8 hours	<b>Unit Code:</b> SEIP-TEX-SPN-02-S
<b>Unit Descriptor:</b> This unit covers the skills, knowledge, and attitudes required to apply occupational health and safety (OHS) 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.		

### Elements and Performance Criteria

Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables.

Elements of Competency	Performance Criteria
1. Identify OHS policies and procedures	1.1. <b><u>OHS policies</u></b> and safe operating procedures are interpreted. 1.2. Safety signs and symbols are identified and followed. 1.3. Response, evacuation procedures and other contingency measures are interpreted correctly.
2. Apply personal health and safety practices	2.1. OHS policies and procedures are applied in the workplace. 2.2. Common health issues are recognised. 2.3. Common safety issues are identified.
3. Report hazards and risks	3.1. Hazards and risks are identified. 3.2. Hazards and risks assessment and controls are interpreted.
4. Respond to emergencies	4.1. Responded to alarms and warning devices. 4.2. <b><u>Emergency response plans and procedures</u></b> are responded to. 4.3. <b><u>First aid procedures</u></b> during emergency situations are identified.

### Range of Variables

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

Variable	Range ( <i>may include but not limited to</i> )
4. Personal protective equipment	4.1. Safety glasses 4.2. Ear muffs 4.3. Ear plugs 4.4. Gloves 4.5. Apron 4.6. Helmet 4.7. Hair net 4.8. Mask 4.8. Safety shoes

Curricula Content Guide	
1. Underpinning knowledge	1.1. Workplace OHS policies and procedures 1.2. Work safety procedures 1.3. Emergency response procedures: <ul style="list-style-type: none"> <li>1.3.1. Fire fighting</li> <li>1.3.2. Earthquake response</li> <li>1.3.3. Accident response</li> </ul> 1.4. Types of hazards (biological, chemical and physical) and their effects 1.5. OHS awareness 1.6. Personal protective equipment (PPE)
2. Underpinning skills	2.1. Identify OHS policies and procedures 2.2. Apply personal health and safety practices 2.3. Report hazards and risks 2.4. Respond to emergencies
3. Underpinning attitudes	3.1 Committed to occupational health and safety practices 3.2 Communicates well with peers, subordinates and seniors in workplace 3.3 Prompt in carrying out activities 3.4 Tidy and punctual 3.5 Sincere and honest concerning duties 3.6 Responsible during emergencies

### Curricula Content Guide

#### 4. Resource implications

The following resources must be provided:

- 4.1. Workplace (simulated or actual)
- 4.2. Personal protective equipment (PPE)
- 4.3. Firefighting equipment
- 4.4. Emergency response manual
- 4.5. First aid kits
- 4.6. Stationary
- 4.7. Learning manual

### Assessment Evidence Guide

#### 1. Critical aspects of competency

Assessment must evidence that the candidate:

- 1.1. identified OHS policies and procedures
- 1.2. identified personal protective equipment (PPE)
- 1.3. applied personal health and safety practices
- 1.4. reported hazards and risks
- 1.5. responded to emergencies

#### 2. Methods of assessment

Methods of assessment may include but is not limited to:

- 2.1. written test
- 2.2. oral test
- 2.3. observation
- 2.4. demonstration
- 2.5. portfolio

#### 3. Context of assessment

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

<b>Unit of Competency:</b> Carry out workplace interaction	<b>Nominal Duration:</b> 8 hours	<b>Unit Code:</b> SEIP-TEX-SPN-03-G
<b>Unit Descriptor:</b> This unit covers the skills, knowledge, and attitudes required to workplace interaction. It specifically includes workplace communication, etiquette, understanding workplace documents, workplace meetings and discussions, and professional ethics at work.		

### Elements and Performance Criteria

Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables.

Elements of Competency	Performance Criteria
1. Interpret workplace communication and etiquette	<p>1.1. Workplace code of conducts 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 to ensure active participation.</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. Opinions and ideas of others and their importance in the development of relationships are respected.</p> <p>3.5. 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 demonstrated.</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	<ul style="list-style-type: none"> <li>1.1. Effective questioning</li> <li>1.2. Active listening</li> <li>1.3. Speaking skills</li> <li>1.4. Writing skill</li> <li>1.5. Email etiquette</li> </ul>
2. Workplace procedures and matters	<ul style="list-style-type: none"> <li>2.1. Notes</li> <li>2.2. Arranging a meeting</li> <li>2.3. Agenda</li> <li>2.4. Simple reports such as progress and incident reports</li> <li>2.5. Job sheets</li> <li>2.6. Operational manuals</li> <li>2.7. Brochures and Promotional material</li> <li>2.8. Visual and graphic materials</li> <li>2.9. Standards</li> <li>2.10. OSH information</li> <li>2.11. Signs</li> </ul>
3. Appropriate sources	<ul style="list-style-type: none"> <li>3.1. Human Resources (HR) Department</li> <li>3.2. Managers</li> <li>3.3. Supervisors</li> <li>3.4. Management Information System (MIS)</li> </ul>

Curricula Content Guide	
1. Underpinning knowledge	<ul style="list-style-type: none"> <li>1.1. Workplace communication and etiquette</li> <li>1.2. Workplace documents, signs and symbols</li> <li>1.3. Meeting procedure and etiquette</li> <li>1.4. Professional ethics</li> </ul>
2. Underpinning skills	<ul style="list-style-type: none"> <li>2.1. Demonstrate workplace communication and etiquette</li> <li>2.2. Interpret workplace instructions and symbols</li> <li>2.3. Demonstrate active participation on workplace meeting</li> <li>2.4. Apply professional ethics at work</li> </ul>
3. Underpinning attitudes	<ul style="list-style-type: none"> <li>3.1 Prompt in carrying out activities</li> <li>3.2 Tidy and Punctual</li> <li>3.3 Respectful of peers, subordinates and seniors in the workplace</li> <li>3.4 Concerned about the work environment</li> <li>3.5 Sincere and honest concerning duties</li> </ul>

### Curricula Content Guide

#### 4. Resource implications

The following resources must be provided:

- 4.1. Workplace (simulated or actual)
- 4.2. Workplace procedures
- 4.3. Workplace documents, signs and symbols
- 4.4. Codes of conduct
- 4.5. Projector
- 4.6. Relevant specifications or work instructions stationary
- 4.7. Learning manual

### Assessment Evidence Guide

#### 1. Critical aspects of competency

Assessment must evidence that the candidate:

- 1.1. interpreted workplace communication and etiquette
- 1.2. interpreted workplace instructions and symbols
- 1.3. performed active participation in workplace meetings

#### 2. Methods of assessment

Methods of assessment may include but is not limited to:

- 2.1. written test
- 2.2. oral test
- 2.3. observation
- 2.4. demonstration
- 2.5. portfolio

#### 3. Context of assessment

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

<b>Unit of Competency:</b> Operate in a team environment	<b>Nominal Duration:</b> 8 hours	<b>Unit Code:</b> SEIP-TEX-SPN-04-G
<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, role and responsibilities, team communication and problem solving within the team.		

### Elements and Performance Criteria

Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables.

Elements of Competency	Performance Criteria
1. Identify team goals and work processes	<p>1.1. Roles and objectives of the team are interpreted.</p> <p>1.2. Roles and responsibilities of team members are 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 provided support.</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 problems.</p> <p>4.2. A range of solutions and courses of action are identified with benefits, costs, and risks associated with each.</p> <p>4.3. The good ideas of others to help develop solutions are recognised and seek advice from those who've 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 ( <i>may include but not limited to</i> )
1. Sharing information	<ul style="list-style-type: none"> <li>1.1. Agenda</li> <li>1.2. Minutes</li> <li>1.3. Progress and incident reports</li> <li>1.4. Operational manuals</li> <li>1.5. Visual and graphic materials</li> <li>1.6. Emails and SMS</li> <li>1.7. Phone directory</li> <li>1.8. Policy, procedure and standards</li> <li>1.9. OSH information</li> <li>1.10. Signs</li> </ul>

Curricula Content Guide	
1. Underpinning knowledge	<ul style="list-style-type: none"> <li>1.1. Team goal and work process</li> <li>1.2. Roles and responsibilities</li> <li>1.3. Formal and informal communication techniques</li> <li>1.4. Finding problems and solving them</li> </ul>
2. Underpinning skills	<ul style="list-style-type: none"> <li>2.1. Identify team goals and work processes</li> <li>2.2. Identify own role and responsibility within team</li> <li>2.3. Communicate and co-operating with team members</li> <li>2.4. Demonstrate problem solving within the team</li> </ul>
3. Underpinning attitudes	<ul style="list-style-type: none"> <li>3.1. Active on teamwork</li> <li>3.2. Prompt in carrying out activities</li> <li>3.3. Tidy and punctual</li> <li>3.4. Respectful of peers, subordinates and seniors in the workplace</li> <li>3.5. Sincere and honest concerning duties</li> </ul>
4. Resource implications	<p>The following resources must be provided:</p> <ul style="list-style-type: none"> <li>4.1. Workplace (simulated or actual)</li> <li>4.2. Pens</li> <li>4.3. Papers</li> <li>4.4. Work books</li> <li>4.5. Learning manual</li> </ul>



<b>Assessment Evidence Guide</b>	
<b>1. Critical aspects of competency</b>	<p>Assessment must evidence that the candidate:</p> <ul style="list-style-type: none"> <li><b>1.1.</b> identified own role and responsibilities within team</li> <li><b>1.2.</b> communicated and co-operated with team members</li> <li><b>1.3.</b> demonstrated problem solving within the team</li> </ul>
<b>2. Methods of assessment</b>	<p>Methods of assessment may include but is not limited to:</p> <ul style="list-style-type: none"> <li><b>2.1.</b> written test</li> <li><b>2.2.</b> oral test</li> <li><b>2.3.</b> observation</li> <li><b>2.4.</b> demonstration</li> <li><b>2.5.</b> portfolio</li> </ul>
<b>3. Context of assessment</b>	<ul style="list-style-type: none"> <li><b>3.1.</b> Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency.</li> <li><b>3.2.</b> Assessment must be done by a suitably qualified/certified assessor.</li> </ul>

<b>Unit of Competency:</b> Apply basic IT skills	<b>Nominal Duration:</b> 8 hours	<b>Unit Code:</b> SEIP-TEX-SPN-05-G
<b>Unit Descriptor:</b> This unit covers the skills, knowledge, and attitudes required to apply basic IT skills. It specifically includes identifying common IT tools, using computer, using word processing application, emailing and searching on internet.		

### Elements and Performance Criteria

Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables.

Elements of Competency	Performance Criteria
1. Identify and use most commonly used IT tools	1.1. History of information technology (IT) is identified and summarised. 1.2. Commonly used <b><u>IT tools</u></b> are identified and described.
2. Understand use of computer	1.1. Basic parts of a computer are identified. 1.2. Turning on and off technique of a computer is performed. 1.3. Working environment, functions and features of operating system is interpreted. 1.4. Simple trouble-shooting techniques are applied.
3. Work with word processing application	2.1. Word processing application appropriate to perform activity is operated. 2.2. Basic typing technique to document is applied. 2.3. Word processing techniques to document are employed. 2.4. Personal CV writing using suitable word processing techniques is practiced. 2.5. Saved and retrieving technique of a document is used.
4. Access email and search the internet	3.1. Use of email account in online environment is explained. 3.2. Writing and sending of work place emails is completed. 3.3. Different <b><u>browsers</u></b> are identified to work online are identified and selected. 3.4. Browsing different web portals and apply proper search techniques.

## Range of Variables

Variable	Range ( <i>may include but not limited to</i> )
1. IT tools	1.1. Phone 1.2. Cell phone 1.3. Tablets 1.4. Computers, laptops, notebooks 1.5. Internet 1.6. Software 1.7. Satellite
2. Browsers	2.1. Internet Explorer 2.2. Firefox 2.3. Google Chrome 2.4. Opera 2.5. Safari 2.6. Omni Web 2.7. Microsoft Edge

Curricula Content Guide	
1. Underpinning knowledge	1.1. IT and IT tools 1.2. Computer trouble-shooting 1.3. Techniques to access internet
2. Underpinning skills	2.1. Demonstrate simple trouble shooting with computer. 2.2. Demonstrate typing on word processing software 2.3. Save and retrieve documents on word processing software 2.4. Open email account and use it for different purposes
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. Resource implications	The following resources must be provided: 4.1. Workplace (simulated or actual) 4.2. Computers/laptop/notebook 4.3. Software 4.4. Internet 4.5. Projector 4.6. Stationary 4.7. Learning manual

Assessment Evidence Guide	
<b>1. Critical aspects of competency</b>	<p>Assessment must evidence that the candidate:</p> <ol style="list-style-type: none"> <li><b>1.1.</b> identified commonly used it tools</li> <li><b>1.2.</b> performed simple trouble-shooting with computer</li> <li><b>1.3.</b> performed typing on word processing software, saved and retrieved documents</li> <li><b>1.4.</b> created email account</li> <li><b>1.5.</b> used email account for different online purposes</li> </ol>
<b>2. Methods of assessment</b>	<p>Methods of assessment may include but is not limited to:</p> <ol style="list-style-type: none"> <li><b>2.1.</b> written test</li> <li><b>2.2.</b> oral test</li> <li><b>2.3.</b> observation</li> <li><b>2.4.</b> demonstration</li> <li><b>2.5.</b> portfolio</li> </ol>
<b>3. Context of assessment</b>	<ol style="list-style-type: none"> <li><b>3.1.</b> Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency.</li> <li><b>3.2.</b> Assessment must be done by a suitably qualified/certified assessor.</li> </ol>

## B: Sector-specific (common) Competencies

<b>Unit of Competency:</b> Explore the history of Textile Sector	<b>Nominal Duration:</b> 8 hours	<b>Unit Code:</b> SEIP-TEX-SPN-01-S
<b>Unit Descriptor:</b> This unit covers the skills, knowledge, and attitudes required to explore the history of the textile sector. It specifically includes interpreting the historical background of textile sector and identifying the prime local and export markets.		

### Elements and Performance Criteria

Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables.

Elements of Competency	Performance Criteria
1. Examine the background of textile sector	1.1. The historical background of textile sector is examined and described. 1.2. <b><u>Steps of textile processing</u></b> are clearly identified. 1.3. Backward and forward linkages are identified.
2. Identify prime local and export markets	2.1. Prime <b><u>local markets</u></b> and <b><u>export markets</u></b> are identified. 2.2. Local and export markets are listed.

### Range of Variables

Variable	Range ( <i>may include but not limited to</i> )
1. Steps of textile processing	1.1. Spinning 1.2. Weaving 1.3. Dyeing, printing and finishing 1.4. Apparel manufacturing
2. Local markets	2.1. Fabric processing mills and factories 2.2. Whole sale markets and retailers
3. Export markets	3.1. Europe 3.2. USA 3.1. Africa

Curricula Content Guide	
1. Underpinning knowledge	1.1. History of textile sector 1.2. Steps of textile processing 1.3. Prime local and export markets

<b>Curricula Content Guide</b>	
<b>2. Underpinning skills</b>	<b>2.1.</b> Describe history of textile sector <b>2.2.</b> Identify steps of textile processing <b>2.3.</b> Identify prime local and export markets
<b>3. Underpinning attitudes</b>	<b>3.1.</b> Eager to learn <b>3.2.</b> Considerate of personal grooming <b>3.3.</b> Patient and attentive <b>3.4.</b> Active on team work <b>3.5.</b> Tidy and punctual <b>3.7</b> Sincere and honest concerning duties
<b>4. Resource implications</b>	The following resources must be provided: <b>4.1.</b> Workplace (simulated or actual) <b>4.2.</b> Map/global <b>4.3.</b> Stationary <b>4.4.</b> Learning manual

<b>Assessment Evidence Guide</b>	
<b>1. Critical aspects of competency</b>	Assessment must evidence that the candidate: <b>1.1.</b> described the history of textile sector <b>1.2.</b> identified basic steps of textile processing <b>1.3.</b> identified prime local and export markets
<b>2. Methods of assessment</b>	Methods of assessment may include but is not limited to: <b>2.1.</b> written test <b>2.2.</b> oral test <b>2.3.</b> observation <b>2.4.</b> demonstration <b>2.5.</b> portfolio
<b>3. Context of assessment</b>	<b>3.1.</b> Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency. <b>3.2.</b> Assessment must be done by a suitably qualified/certified assessor.

<b>Unit of Competency:</b> Use hand and power tools	<b>Nominal Duration:</b> 24 hours	<b>Unit Code:</b> SEIP-TEX-SPN-02-S
<b>Unit Descriptor:</b> This unit covers the skills, knowledge, and attitudes required to use hand tools and power tools in the textile sector. 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.		

### Elements and Performance Criteria

Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables.

Elements of Competency	Performance Criteria
1. Identify and inspect hand and power tools	1.1. Appropriate hand and power tools are identified. 1.2. Application of hand and power tools is recognised. 1.3. Usability of hand and power tools are checked and verified.
2. Use hand tools properly and safely	2.1. Appropriate <b><u>hand tools</u></b> are selected. 2.2. <b><u>Safety precautions</u></b> are ensured before using hand tools. 2.3. Unsafe or faulty tools are identified and marked for repair. 2.4. <b><u>Measuring tools</u></b> are checked and calibrated before use. 2.5. Use hand tools properly and safely to perform work activity.
3. Operate power tools properly and safely	3.1. Appropriate <b><u>power tools</u></b> are selected. 3.2. Power supply outlet and electrical cord are inspected and confirmed safe for use in accordance with established workplace safety requirements. 3.3. Safety precautions are ensured before using power tools in accordance with manufacturer's operating specification. 3.4. Proper sequence of operation applied for using power tools. 3.5. Unsafe or faulty power tools are identified and marked for repair. 3.6. Power tools are used safely in accordance to manufacturer's operating specification.
4. Clean and maintain hand and power tools	4.1. Dust and foreign matters are removed from hand and power tools in accordance to workplace standards. 4.2. Condition of hand and power tools are checked after use and report. 4.3. Appropriate lubricant is applied after use and prior to storage. 4.4. Measuring tools are checked and calibrated after use. 4.5. Defective hand and power tools are inspected and repaired or replaced. 4.6. Hand and power tools are stored and secured in accordance with workplace requirements.

## Range of Variables

Variable	Range ( <i>may include but not limited to</i> )
1. Hand tools	<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. Wrenches</li> <li>1.8. Hand tap</li> <li>1.9. Wire cutters</li> <li>1.10. Drill</li> <li>1.11. Spanner</li> <li>1.12. Socket ratchet set</li> <li>1.13. Easy opener</li> <li>1.14. Slide range</li> <li>1.15. L-key</li> </ul>
2. Power tools	<ul style="list-style-type: none"> <li>2.1. Portable drill</li> <li>2.2. Threading machine</li> <li>2.3. Saw</li> <li>2.4. Glue gun</li> <li>2.5. Soldering iron</li> <li>2.6. Grinder</li> </ul>
3. Safety precautions	<ul style="list-style-type: none"> <li>3.1. Use of appropriate PPE</li> <li>3.2. Proper hand, feet and eye coordination</li> <li>3.3. Safe condition of electrical outlets, cords and lamps</li> <li>3.4. Working environment</li> <li>3.5. safe operating condition of hand tools and power tools</li> <li>3.6. Awareness to OHS requirements</li> </ul>
4. Measuring tools	<ul style="list-style-type: none"> <li>4.1. Measuring tape</li> <li>4.2. Level</li> <li>4.3. Steel tape</li> <li>4.4. Tension meter</li> </ul>

Curricula Content Guide	
1. Underpinning knowledge	<ul style="list-style-type: none"> <li>1.1. Information on types of hand and power tools, their functions and use</li> <li>1.2. Procedures for safely using hand and power tools</li> </ul>



<b>Curricula Content Guide</b>	
2. Underpinning skills	<p>2.1. Identify hand and power tools, and measuring tools used in textile sector</p> <p>2.2. Follow safety precautions when using hand and power tools, and measuring tools</p> <p>2.3. Operate power tools correctly and safely in accordance to manufacturer's operating specification</p> <p>2.4. Clean and maintain hand and power tools after use</p> <p>2.5. Apply appropriate lubricant on hand and power tools after using and prior to storing</p>
3. Underpinning attitudes	<p>3.1 Commitment to occupational health and safety</p> <p>3.2 Promptness in carrying out activities</p> <p>3.3 Sincere and honest to duties</p> <p>3.4 Environmental concerns</p> <p>3.5 Tidiness and timeliness</p> <p>3.6 Concerned for the proper use of tools</p>
4. Resource implications	<p>The following resources must be provided:</p> <p>4.1. Workplace (simulated or actual)</p> <p>4.2. Hand and power tools</p> <p>4.3. Measuring tools</p> <p>4.4. Projector</p> <p>4.5. Stationary</p> <p>4.6. Learning manual</p>

<b>Assessment Evidence Guide</b>	
1. Critical aspects of competency	<p>Assessment must evidence that the candidate:</p> <p>1.1. identified and selected appropriate hand and power tools for work to be performed</p> <p>1.2. identified and used measuring tools appropriate to work activity</p> <p>1.3. followed safety precautions when using hand and power tools</p> <p>1.4. operated power tools safely and pursuant to manufacturer's operating specification</p> <p>1.5. performed cleaning and maintenance of hand and power tools after use and prior to storing</p>
2. Methods of assessment	<p>Methods of assessment may include but is not limited to:</p> <p>2.1. written test</p> <p>2.2. oral test</p> <p>2.3. observation</p> <p>2.4. demonstration</p> <p>2.5. portfolio</p>

## Assessment Evidence Guide

### 3. Context of assessment

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

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

<b>Unit of Competency:</b> Read and interpret sketches and drawings	<b>Nominal Duration:</b> 8 hours	<b>Unit Code:</b> SEIP-TEX-SPN-03-S
<b>Unit Descriptor:</b> This unit covers the skills, knowledge, and attitudes required to read and interpret sketches and specifications in textile manuals. It specifically includes identification of information and specifications, and reading and interpreting sketches and drawings as required.		

### Elements and Performance Criteria

Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables.

Elements of Competency	Performance Criteria
1. Identify information and specifications	1.1. Appropriate <b><u>manuals</u></b> and <b><u>specifications</u></b> for work activity are identified. 1.2. Information and specifications and their importance is recognised.
2. Read and interpret sketches and drawings	2.1. Relevant <b><u>sketches and drawings</u></b> are identified for job requirement. 2.2. <b><u>Signs and symbols</u></b> are identified and interpreted. 2.3. Schedules, dimensions, drawings and specifications are correctly read and interpreted.

### Range of Variables

Variable	Range ( <i>may include but not limited to</i> )
1. Manuals	1.1. Manufacturer's specification 1.2. Repair 1.3. Maintenance procedure 1.4. Periodic maintenance 1.5. Quality assurance 1.6. Compliance 1.7. Signs and symbols instruction 1.8. Standard operating procedure
2. Specifications	2.1. Product 2.2. Performance 2.3. Method
3. Sketches and drawings	3.1. Technical 3.2. Measurement
4. Signs and symbols	4.1. Include all signs and symbols associated with the textile sector

<b>Curricula Content Guide</b>	
1. Underpinning knowledge	1.1. Types of manuals used in textile sector 1.2. Common signs and symbols 1.3. Units of measurement 1.4. Units of conversion 1.5. Sketches and drawings
2. Underpinning skills	2.1. Identify information and specifications from manuals as required 2.2. Read and interpret information and specifications as per job requirement 2.3. Read and interpret sketches and drawings 2.4. Identify signs and symbols
3. Underpinning attitudes	3.1 Eager to learn 3.2 Considerate of personal grooming 3.3 Patient and attentive 3.4 Active on team work 3.5 Tidy and punctual 3.6 Sincere and honest concerning duties
4. Resource implications	The following resources must be provided: 4.1. Workplace (simulated or actual) 4.2. Computer/laptop/notebook 4.3. Software 4.4. Projector 4.5. Stationary 4.6. Learning manual

<b>Assessment Evidence Guide</b>	
1. Critical aspects of competency	Assessment must evidence that the candidate: 1.1. identified and interpreted information and specifications 1.2. read and interpreted sketches and drawings 1.3. identified and interpreted signs and symbols
2. Methods of assessment	Methods of assessment may include but is not limited to: 2.1. written test 2.2. oral test 2.3. observation 2.4. demonstration 2.5. portfolio

### Assessment Evidence Guide

#### 3. Context of assessment

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

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

## C: Occupation-specific (core) Competencies

<b>Unit of Competency:</b> Interpret the basics of yarn manufacturing	<b>Nominal Duration:</b> 24 hours	<b>Unit Code:</b> SEIP-TEX-SPN-01-0
<b>Unit Descriptor:</b> This unit covers the skills, knowledge, and attitudes required to interpret the basics of yarn manufacturing. It specifically includes understanding the yarn manufacturing process, identifying raw materials, tools, equipment, and machines, and interpreting common technical terms in the workplace.		

### Elements and Performance Criteria

Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables.

Elements of Competency	Performance Criteria
1. Understand yarn manufacturing process	1.1. Yarn manufacturing processes is identified and explained. 1.2. Role of an operator in a textile mill is explained. 1.3. Types of <b><u>yarn</u></b> are identified. 1.4. Lay-out of spinning floor is identified and illustrated.
2. Identify raw materials	2.1. Types of <b><u>fibres</u></b> are identified. 2.2. Types of <b><u>impurities</u></b> are identified. 2.3. Fibre <b><u>contamination</u></b> is identified and described.
3. Identify tools, equipment and machines	3.1. <b><u>Tools</u></b> and <b><u>equipment</u></b> required for spinning are identified. 3.2. Different <b><u>machines</u></b> required for spinning are identified.
4. Interpret technical terms	4.1. <b><u>Technical terms</u></b> used in spinning process are identified. 4.2. Technical terms are interpreted.

### Range of Variables

Variable	Range (may include but not limited to)
1. Yarns	1.1. Carded 1.2. Combed 1.3. Ring 1.4. Rotor/open end
2. Fibres	2.1. Cotton 2.2. Cotton/polyester blend 2.3. Cotton/viscose blend
3. Impurities	3.1. Cotton seed 3.2. Dry leaves 3.3. Broken metal parts 3.4. Packing materials 3.5. Foreign matters

<b>Variable</b>	<b>Range (may include but not limited to)</b>
4. Contamination	4.1. Immature fibres 4.2. Dead fibres 4.3. Dry leaves 4.4. Foreign fibres 4.5. Coloured fibres
5. Tools	5.1. Pocket tape 5.2. Adjustable wrench 5.3. Files (flat, round, half round) 5.4. Hacksaw 5.5. Hammer 5.6. Pliers 5.7. Screw drives 5.8. Hand puller
6. Equipment	6.1. Bobbin 6.2. Bobbin holder 6.3. Can 6.4. Trolley
7. Machines	7.1. Blow room 7.2. Carding 7.3. Breaker draw 7.4. Lap former 7.5. Comber 7.6. Finisher draw 7.7. Simplex/speed frame 7.8. Ring frame/rotor spinning 7.9. Auto-coner
8. Technical terms	8.1. Inching motion 8.2. Creeling 8.3. Piecing 8.4. Doffing

<b>Curricula Content Guide</b>	
1. Underpinning knowledge	1.1. Yarn manufacturing process with emphasis on spinning 1.2. Different types of yarns and fibres 1.3. Types of raw materials used in yarn manufacturing 1.4. Tools, equipment and machines 1.5. Fibre impurities and containments

<b>Curricula Content Guide</b>	
<b>2. Underpinning skills</b>	<ul style="list-style-type: none"> <li><b>2.1.</b> Identify different types of yarns and fibres</li> <li><b>2.2.</b> Identify spinning tools, equipment and machines</li> <li><b>2.3.</b> Identify and describe fibre impurities and contamination</li> <li><b>2.4.</b> Identify and explain key technical terms</li> </ul>
<b>3. Underpinning attitudes</b>	<ul style="list-style-type: none"> <li><b>3.1</b> Eager to learn</li> <li><b>3.2</b> Active on team work</li> <li><b>3.3</b> Patient and attentive</li> <li><b>3.4</b> Prompt in carrying out activities</li> <li><b>3.5</b> Tidy and punctual</li> <li><b>3.6</b> Respectful of peers, subordinates and seniors in the workplace</li> </ul>
<b>4. Resource implications</b>	<p>The following resources must be provided:</p> <ul style="list-style-type: none"> <li><b>4.1.</b> Workplace (simulated or actual)</li> <li><b>4.2.</b> Tools, equipment and machines</li> <li><b>4.3.</b> Materials (i.e. yarn)</li> <li><b>4.4.</b> Product specifications</li> <li><b>4.5.</b> Projector</li> <li><b>4.6.</b> Stationary</li> <li><b>4.7.</b> Learning manual</li> </ul>

<b>Assessment Evidence Guide</b>	
<b>1. Critical aspects of competency</b>	<p>Assessment must evidence that the candidate:</p> <ul style="list-style-type: none"> <li><b>1.1.</b> described the yarn manufacturing process (related to spinning)</li> <li><b>1.2.</b> identified correctly tools, equipment and machines used in yarn manufacturing</li> <li><b>1.3.</b> identified various types of yarns and fibres</li> <li><b>1.4.</b> identified and described fibre impurities and contamination</li> </ul>
<b>2. Methods of assessment</b>	<p>Methods of assessment may include but is not limited to:</p> <ul style="list-style-type: none"> <li><b>2.1.</b> written test</li> <li><b>2.2.</b> oral test</li> <li><b>2.3.</b> observation</li> <li><b>2.4.</b> demonstration</li> <li><b>2.5.</b> portfolio</li> </ul>
<b>3. Context of assessment</b>	<ul style="list-style-type: none"> <li><b>3.1.</b> Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency.</li> <li><b>3.2.</b> Assessment must be done by a suitably qualified/certified assessor.</li> </ul>



<b>Unit of Competency:</b> Operate blow room machine	<b>Nominal Duration:</b> 56 hours	<b>Unit Code:</b> SEIP-TEX-SPN-02-O
<b>Unit Descriptor:</b> This unit covers the skills, knowledge, and attitudes required to operate blow room machines. It specifically includes carrying out bale opening, performing cleaning operation, operating the blow room machine, carrying out blending of different fibres, and disposing of waste material.		

### Elements and Performance Criteria

Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables.

Elements of Competency	Performance Criteria
1. Carry out bale opening operation	1.1. <b><u>Materials</u></b> are identified according to job requirements. 1.2. <b><u>Tools</u></b> are identified and selected according to job requirements. 1.3. The fibres are brushed to remove dust during loading and unloading. 1.4. Fibres are laid down according to bale management.
2. Perform cleaning operation	2.1. <b><u>Natural impurities</u></b> are removed. 2.2. <b><u>Foreign materials</u></b> are removed. 2.3. Fibres are opened.
3. Operate blow room line machine	3.1. Machine is operated (i.e. starting and stopping) as per standard operating procedure. 3.2. Machine is stopped in case of any emergency. 3.3. <b><u>Control points</u></b> of blow room line machine are identified.
4. Carry out blending of different fibres	4.1. Fibres from different bales are blended. 4.2. Different types of fibres are blended.
5. Dispose of waste material	5.1. Waste material from machine is identified. 5.2. Waste material is separated and disposed of as per standard operating procedure.

### Range of Variables

Variable	Range (may include but not limited to)
1. Materials	1.1 Bales 1.2 Fibres

<b>Variable</b>	<b>Range (may include but not limited to)</b>
2. Tools	2.1. Pocket tape 2.2. Wire stripper 2.3. Adjustable wrench 2.4. Hammers (ball peen, claw) 2.5. Pliers (combination, cutting, diagonal, long nose) 2.6. Screwdrivers (star, negative, positive) 2.7. Scissors
3. Natural impurities	3.1. Dry leaves 3.2. Broken seeds 3.3. Dead fibres
4. Foreign materials	4.1 Metal parts 4.2 Packing materials
5. Control points	5.1. Brake system 5.2. Feed zone 5.3. Delivery zone 5.4. Start and stop 5.5. Grid bar

<b>Curricula Content Guide</b>	
1. Underpinning knowledge	1.1. Correct procedure for the opening process of bales and fibres 1.2. Appropriate cleaning process of fibres 1.3. Basic operation of the machine
2. Underpinning skills	2.1. Carry out opening of bales and fibres 2.2. Cleaning the fibres and machine 2.3. Operating the machine
3. Underpinning attitudes	3.1 Eager to learn 3.2 Concerned for working environment 3.3 Active on team work 3.4 Tidy and punctual 3.5 Respectful of peers, subordinates and seniors in the workplace 3.6 Communicate with peers and seniors in the workplace

### Curricula Content Guide

#### 4. Resource implications

The following resources must be provided:

- 4.1. Workplace (simulated or actual)
- 4.2. Blow room machine
- 4.3. Tools and equipment
- 4.4. Job sheets
- 4.5. Standard operating procedure
- 4.6. Projector
- 4.7. Stationary
- 4.8. Learning resources

### Assessment Evidence Guide

#### 1. Critical aspects of competency

Assessment must evidence that the candidate:

- 1.1. carried out bale opening operation correctly
- 1.2. identified and removed natural impurities and foreign materials
- 1.3. operated blow room machine and identified control points
- 1.4. blended different types of fibres
- 1.5. disposed of waste material properly

#### 2. Methods of assessment

Methods of assessment may include but is not limited to:

- 2.1. written test
- 2.2. oral test
- 2.3. observation
- 2.4. demonstration
- 2.5. portfolio

#### 3. Context of assessment

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

<b>Unit of Competency:</b> Prepare materials for spinning	<b>Nominal Duration:</b> 56 hours	<b>Unit Code:</b> SEIP-TEX-SPN-03-O
<b>Unit Descriptor:</b> This unit covers the knowledge, skills and attitudes required to prepare materials for spinning. It specifically includes operating the machines, performing production of sliver and lap, cleaning the machine and disposing of waste material.		

### Elements and Performance Criteria

Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables.

Elements of Competency	Performance Criteria
1. Operate the machines	1.1. Appropriate <b><u>personal protective equipment (PPE)</u></b> is identified and selected. 1.2. <b><u>Hand tools</u></b> are identified and selected as per job requirement. 1.3. <b><u>Control points</u></b> are identified. 1.4. The <b><u>machines</u></b> are operated as per standard operating procedure.
2. Perform production of sliver and lap	2.1. <b><u>Materials</u></b> are fed into the machines as per standard operating procedure. 2.2. Broken materials are pieced as per standard operating procedure. 2.3. Carded and drawn sliver, and mini laps are collected. 2.4. Carded and drawn sliver, and mini laps are doffed.
3. Clean the machine	3.1. Machine parts are cleaned as per manufacturer instructions. 3.2. Cans and spools are cleaned as per standard operating procedure.
4. Dispose of waste material	4.1. Waste material from machine is identified. 4.2. Waste material is separated and disposed of as per standard operating procedure.

### Range of Variables

Variable	Range ( <i>may include but not limited to</i> )
1. Personal protective equipment (PPE)	1.1. Skull guard/helmet 1.2. Safety glasses 1.3. Gloves 1.4. Safety shoes 1.5. Apron 1.6. Mask 1.7. Ear plugs

Variable	Range ( <i>may include but not limited to</i> )
2. Hand tools	2.1. Sample cutter 2.2. Yarn guide 2.3. Feeder 2.4. Tape tensioner 2.5. Industrial weight scales 2.6. Machine brush
3. Control points	3.1. Start and stop 3.2. Brake system 3.3. Drafting zone
4. Machines	4.1. Carding 4.2. Breaker draw frame 4.3. Lap former
5. Materials	5.1. Chute or card mat 5.2. Carded sliver 5.3. Drawn sliver
6. Machine parts	6.1. Upper surface of sliver cover 6.2. Creeling zone 6.3. Feed zone 6.4. Delivery zone 6.5. Drafting zone 6.6. Filter box
7. Waste material	7.1. Droppings 7.2. Flat strip 7.3. Filter dust 7.4. Sliver waste

Curricula Content Guide	
1. Underpinning knowledge	1.1. Appropriate personal protective equipment (PPE) 1.2. Correct operating procedure for machines 1.3. Process for cleaning the machines
2. Underpinning skills	2.1. Operate the machines 2.2. Feed and piece materials 2.3. Clean the machines 2.4. Dispose of waste materials

<b>Curricula Content Guide</b>	
<b>3. Underpinning attitudes</b>	<ul style="list-style-type: none"> <li>3.1 Committed to occupational health and safety practices</li> <li>3.2 Eager to learn</li> <li>3.3 Concerned for working environment</li> <li>3.4 Active on team work</li> <li>3.5 Tidy and punctual</li> <li>3.6 Respectful of peers, subordinates and seniors in the workplace</li> <li>3.7 Communicate with peers and seniors in the workplace</li> </ul>
<b>4. Resource implications</b>	<p>The following resources must be provided:</p> <ul style="list-style-type: none"> <li>4.1. Workplace (simulated or actual)</li> <li>4.2. Personal protective equipment (PPE)</li> <li>4.3. Hand tools</li> <li>4.4. Machines</li> <li>4.5. Standard operating procedure</li> <li>4.6. Job sheet</li> <li>4.7. Stationary</li> <li>4.8. Learning manual</li> </ul>

<b>Assessment Evidence Guide</b>	
<b>1. Critical aspects of competency</b>	<p>Assessment must evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1. applied OHS practices in the workplace</li> <li>1.2. operated the machines (including identifying control points)</li> <li>1.3. fed material into the machines</li> <li>1.4. pieced broken materials</li> <li>1.5. cleaned the machines correctly</li> <li>1.6. disposed of waste material properly</li> </ul>
<b>2. Methods of assessment</b>	<p>Methods of assessment may include but is not limited to:</p> <ul style="list-style-type: none"> <li>2.1. written test</li> <li>2.2. oral test</li> <li>2.3. observation</li> <li>2.4. demonstration</li> <li>2.5. portfolio</li> </ul>
<b>3. Context of assessment</b>	<ul style="list-style-type: none"> <li>3.1. Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency.</li> <li>3.2. Assessment must be done by a suitably qualified/certified assessor.</li> </ul>

<b>Unit of Competency:</b> Perform spinning operation	<b>Nominal Duration:</b> 56 hours	<b>Unit Code:</b> SEIP-TEX-SPN-04-O
<b>Unit Descriptor:</b> This unit covers the skills, knowledge, and attitudes required to perform spinning operation. It specifically includes handling lap trolley, operating the machine (comber and finisher draw frame), perform feeding of materials and piecing, cleaning the machine and disposing of waste material.		

### Elements and Performance Criteria

Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables.

Elements of Competency	Performance Criteria
1. Handle lap trolley	1.1. Lap trolley of full and empty packages is collected as per schedule. 1.2. Trolley wheels are cleaned as per schedule.
2. Operate the machine	2.1. Appropriate <b><u>personal protective equipment (PPE)</u></b> is identified and selected. 2.2. Hand tools are identified and selected as per job requirement. 2.3. Control points are identified. 2.4. The machines are operated as per standard operating procedure.
3. Perform feeding of materials and piecing	3.1. Materials are fed into the machine as per standard operating procedure. 3.2. Broken materials are pieced as per standard operating procedure.
4. Clean the machine, cans and spools	4.1. <b><u>Machine parts</u></b> are cleaned as per manufacturer instructions. 4.2. Cans and spools are cleaned as per standard operating procedure.
5. Dispose of waste material	5.1. Waste material from machine is identified. 5.2. Waste material is separated and disposed of as per standard operating procedure.

### Range of Variables

Variable	Range (may include but not limited to)
1. Personal protective equipment (PPE)	1.1. Apron 1.2. Safety glasses 1.3. Gloves 1.4. Ear plugs 1.5. Mask 1.6. Safety shoes

Variable	Range ( <i>may include but not limited to</i> )
2. Machine parts	2.1. Combing zone 2.2. Drafting zone 2.3. Filter box

Curricula Content Guide	
1. Underpinning knowledge	1.1. Standard operating procedure for machines 1.2. Process of feeding and doffing materials 1.3. Method of cleaning the machines, cans and spools
2. Underpinning skills	2.1. Use lap trolley for handling of materials 2.2. Feed and piece materials 2.3. Clean the machines, cans and spools 2.4. Dispose of waste materials
3. Underpinning attitudes	3.1 Committed to occupational health and safety practices 3.2 Eager to learn 3.3 Concerned for environment 3.4 Active on team work 3.5 Tidy and punctual 3.6 Respectful of peers, subordinates and seniors in the workplace 3.7 Communicate with peers and seniors in the workplace
4. Resource implications	The following resources must be provided: 4.1. Workplace (simulated or actual) 4.2. Personal protective equipment (PPE) 4.3. Standard operating procedure 4.4. Machines 4.5. Lap trolley 4.6. Job sheets 4.7. Projector 4.8. Stationary 4.9. Learning manual



## Assessment Evidence Guide

<b>1. Critical aspects of competency</b>	Assessment must evidence that the candidate: <b>1.1.</b> applied OHS practices in the workplace <b>1.2.</b> operated the machines (including identifying control points) <b>1.3.</b> fed materials into the machines <b>1.4.</b> pieced broken materials <b>1.5.</b> cleaned the machines, cans and spools correctly <b>1.6.</b> disposed of waste material properly
<b>2. Methods of assessment</b>	Methods of assessment may include but is not limited to: <b>2.1.</b> written test <b>2.2.</b> oral test <b>2.3.</b> observation <b>2.4.</b> demonstration <b>2.5.</b> portfolio
<b>3. Context of assessment</b>	<b>3.1.</b> Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency. <b>3.2.</b> Assessment must be done by a suitably qualified/certified assessor.

<b>Unit of Competency:</b> Perform spinning and finishing	<b>Nominal Duration:</b> 64 hours	<b>Unit Code:</b> SEIP-TEX-SPN-05-O
<b>Unit Descriptor:</b> This unit covers the skills, knowledge, and attitudes required for performing spinning and finishing. It specifically includes operating machines, performing feeding, creeling and piecing of materials, carrying out doffing operation, cleaning the machines and packages, and disposing of waste material.		

### Elements and Performance Criteria

Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables.

Elements of Competency	Performance Criteria
1. Operate the machine	1.1. Appropriate personal protective equipment (PPE) is identified and selected. 1.2. Hand tools are identified and selected as per job requirement. 1.3. <b><u>Control points</u></b> are identified. 1.4. The <b><u>machines</u></b> are operated as per standard operating procedure. 1.5. <b><u>Block of materials</u></b> are identified and separated.
2. Perform feeding, creeling and piecing	2.1. <b><u>Materials</u></b> are identified and arranged. 2.2. Materials are fed into the machines as per standard operating procedure. 2.3. Broken materials are pieced to continue production.
3. Perform doffing operation	3.1. Roving and yarns are collected. 3.2. Full and empty <b><u>packages</u></b> are arranged as required.
4. Clean the machines and packages	4.1. <b><u>Machine parts</u></b> are cleaned as per manufacturer instructions. 4.2. Packages are cleaned as per standard operating procedure.
5. Dispose of waste material	5.1. Waste material from machine is identified. 5.2. Waste material is separated and disposed of as per standard operating procedure.

### Range of Variables

Variable	Range (may include but not limited to)
1. Control points	1.1. Machine speed 1.2. Drum speed
2. Machines	2.1. Simplex/speed frame 2.2. Ring frame 2.3. Rotar spinning 2.4. Auto-coner

<b>Variable</b>	<b>Range (may include but not limited to)</b>
3. Block materials	3.1. Different count 3.2. Different fibres
4. Materials	4.1. Sliver 4.2. Roving 4.3. Yarn
5. Packages	5.1. Sliver can 5.2. Roving bobbin 5.3. Ring cop 5.4. Cone
6. Machine parts	6.1. Drafting zone 6.2. Spinning head 6.3 Drum head 6.4 Guide 6.5 Tensioner

<b>Curricula Content Guide</b>	
1. Underpinning knowledge	1.1. Procedures and feeding system of ring frame 1.2. Procedures and feeding system of simplex 1.3. Control and operating system of the machines
2. Underpinning skills	2.1. Operate the ring frame machine 2.2. Operate the simplex machine 2.3. Manage the feeding and delivery of material 2.4. Clean the machines and packages 2.5. Dispose of waste material
3. Underpinning attitudes	3.1 Committed to occupational health and safety practices 3.2 Eager to learn 3.3 Concerned for environment 3.4 Tidy and punctual 3.5 Respectful of peers, subordinates and seniors in the workplace 3.6 Communicate with peers and seniors in the workplace

### Curricula Content Guide

#### 4. Resource implications

The following resources must be provided:

- 4.1. Workplace (simulated or actual)
- 4.2. Hand tools
- 4.3. Machines
- 4.4. Packages
- 4.5. Standard operating procedure
- 4.6. Projector
- 4.7. Stationary
- 4.8. Learning manual

### Assessment Evidence Guide

#### 1. Critical aspects of competency

Assessment must evidence that the candidate:

- 1.1. applied OHS practices in the workplace
- 1.2. operated the machines (including identifying control points)
- 1.3. carried out feeding, creeling and piecing
- 1.4. performed doffing operation
- 1.5. cleaned the machines and packages correctly
- 1.6. disposed of waste material properly

#### 2. Methods of assessment

Methods of assessment may include but is not limited to:

- 2.1. written test
- 2.2. oral test
- 2.3. observation
- 2.4. demonstration
- 2.5. portfolio

#### 3. Context of assessment

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

<b>Unit of Competency:</b> Carry out quality control of material	<b>Nominal Duration:</b> 24 hours	<b>Unit Code:</b> SEIP-TEX-SPN-06-O
<b>Unit Descriptor:</b> This unit covers the skills, knowledge, and attitudes required to carry out quality control of materials. It specifically includes identifying spinning accessories to be implemented, identifying fibre and yarn faults, and testing the quality of the materials.		

### Elements and Performance Criteria

Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables.

Elements of Competency	Performance Criteria
1. Identify spinning accessories	1.1. <b><u>Spinning accessories</u></b> are identified and selected as per the product specifications. 1.2. Selected spinning accessories are implemented.
2. Identify fibre and yarn faults	2.1. <b><u>Fibre and yarn faults</u></b> are identified. 2.2. Identified faults are reported to appropriate authority.
3. Test the quality of the material	3.1. Material quality is identified and established. 3.2. Fibre and yarn properties are tested. 3.3. Test results are reported to appropriate authority.

### Range of Variables

Variable	Range ( <i>may include but not limited to</i> )
1. Spinning accessories	1.1. Head 1.2. Guide 1.3. Tensioner 1.4. Package 1.5. Bobbin 1.6. Cone
2. Fibre faults	2.1. Foreign matters 2.2. Dead fibres 2.3. Immature fibres
3. Yarn faults	3.1. Thick 3.2. Thin 3.3. Neps 3.4. Slubs 3.5. Soft 3.6. Loose 3.7. Knots

<b>Curricula Content Guide</b>	
1. Underpinning knowledge	1.1. Types of accessories required for spinning machines 1.2. Different faults generated during spinning
2. Underpinning skills	2.1. Identify and select spinning accessories 2.2. Identify fibre and yarn faults
3. Underpinning attitudes	3.1 Eager to learn 3.2 Tidy and punctual 3.3 Active on team work 3.4 Concerned with the proper use of computers and peripherals 3.5 Sincere and honest concerning duties
4. Resource implications	The following resources must be provided: 4.1. Workplace (simulated or actual) 4.2. Product specifications 4.3. Job sheet 4.4. Accessories 4.5. Projector 4.6. Stationary 4.7. Learning manual

<b>Assessment Evidence Guide</b>	
1. Critical aspects of competency	Assessment must evidence that the candidate: 1.1. identified and select appropriate spinning accessories 1.2. identified fibre and yarn faults properly 1.3. tested the quality of the material correctly as per standard operating procedure
2. Methods of assessment	Methods of assessment may include but is not limited to: 2.1. written test 2.2. oral test 2.3. observation 2.4. demonstration 2.5. portfolio
3. Context of assessment	3.1. Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency. 3.2. Assessment must be done by a suitably qualified/certified assessor.