



Skills for Employment Investment Program (SEIP)

COMPETENCY STANDARD FOR RING FRAME: BASICS AND TECHNIQUES *(TEXTILE SECTOR)*

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

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Copyright

The Competency Standard for Ring Frame: Basics and Techniques 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

General	
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
Occupation Specific	
TPI	Twist per inch
OHS	Occupational health and safety
PPE	Personal protective equipment
SOP	Standard operating procedure

Introduction

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

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 10 March 2018 and concluded with a validation workshop with working group on 21 May 2018.

Experts Involved

Industry and subject-matter experts who provided their valuable inputs to develop this competency standard [March – May 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. Aatur 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

Working group formation and competency standard development workshop participants [held on 3 May 2018]:

Name	Organisation	Designation
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Engr. Kazi Zahirul Islam	Asia Composite Mills Limited	General Manager (Quality & Planning)
Dr.Md. Shah Alam Majumder	BTEB	Specialist (Course Accreditation)
Md. Matiar Rahman	BTB	Principal
S.M.Ashique	NITER (BTMA-SEIP)	Lecturer (External Assessor)

Name	Organisation	Designation
Prahalad Acharjee	Maksons Spinning Mills Limited	Senior Manager and Trainer
Syed Nasir Ershad	SEIP	AEPD (Public1)
Md. Ahsan Habib	SEIP	TVET Specialist
Mr Mohiuzzaman	SEIP	Course Specialist
Dr Md. Wazed Ali	British Council - SD03	Deputy Team Leader
Shilpi Akter	British Council - SD03	National Subject Matter Consultant - Textile

Validation Workshop

Competency standard validation workshop participants [held on 21 May 2018]:

Name	Organisation	Designation
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Md. Matiar Rahman	BTB	Principal
Prahalad Acharjee	Maksons Spinning Mills Limited	Senior Manager and Trainer
Md. Zahurul Islam	Maksons Spinning Mills Limited	Senior Officer
Md. Daud Uddin	SIM Fabrics Limited	Senior Production Officer
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

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 **[INSERT CS NAME]**, 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:

[INSERT CS NAME], Level [INSERT LEVEL]		

Course Structure

SL	Unit Code and Title		Level	Nominal Duration (Hours)
Generic Competencies (5 units of competency required)				
1	SEIP-TEX-RF-01-G	Use basic mathematical concepts		8
2	SEIP-TEX-RF-02-S	Apply occupational health and safety (OHS) practice in the workplace		8
3	SEIP-TEX-RF-03-G	Carry out workplace interaction		8
4	SEIP-TEX-RF-04-G	Operate in a team environment		8
5	SEIP-TEX-RF-05-G	Apply basic IT skills		8
Sub-Total				40
Sector-specific Competencies (3 units of competency required)				
1	SEIP-TEX-RF-01-S	Explore the history of textile sector		16
2	SEIP-TEX-RF-02-S	Use hand tools and power tools		24
3	SEIP-TEX-RF-03-S	Read and interpret sketches and drawings		8
Sub-Total				48
Occupation-specific Competencies (6 units of competency required)				
1	SEIP-TEX-RF-01-O	Interpret the basics of ring frame		24
2	SEIP-TEX-RF-02-O	Carry out ring frame operations		88
3	SEIP-TEX-RF-03-O	Handle the materials		64
4	SEIP-TEX-RF-04-O	Understand drafting system and drafting zone		32
5	SEIP-TEX-RF-05-O	Carry out quality control and maintenance		40
6	SEIP-TEX-RF-06-O	Carry out production calculations		24
Sub-Total				272
Total Nominal Learning Hours				360

Competency Chart

Units of Competency	Elements		
Use basic mathematical concepts SEIP-TEX-RF-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-RF-02-G	Identify OHS policies and procedures	Apply personal health and safety practices
Respond to emergencies			
Carry out workplace interaction SEIP-TEX-RF-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-RF-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-RF-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-RF-01-S</p>	<p>Examine the background of textile sector</p>	<p>Identify main industries within textile sector</p>	<p>Identify prime local and export markets</p>
<p>Use hand and power tools SEIP-TEX-RF-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 and power tools</p>		
<p>Read and interpret sketches and drawings SEIP-TEX-RF-03-S</p>	<p>Interpret information and specifications</p>	<p>Read and interpret sketches and drawings</p>	

Occupation-specific (Core) Competencies

Interpret the basics of ring frame SEIP-TEX-RF-01-O	Understand the ring frame process	Identify machine and machine specifications	Identify parts and functions of machine
	Interpret technical terms		
Carry out ring frame operations SEIP-TEX-RF-02-O	Collect roving for feeding	Perform creeling, feeding and piecing	Operate ring frame
	Clean and maintain the machine		
Handle the materials SEIP-TEX-RF-03-O	Perform doffing operation	Handle packages and trolley	Dispose of waste material
Understand drafting system and drafting zone SEIP-TEX-RF-04-O	Explain drafting system	Identify functions of drafting zone	
Carry out quality control and maintenance SEIP-TEX-RF-05-O	Identify roving and yarn faults	Test quality of material	Carry out maintenance work
Carry out production calculations SEIP-TEX-RF-06-O	Identify the speed of different parts	Calculate production quantity	

Units and Elements Table

Generic – Compulsory (5 units of competency required)

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

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

Code	Unit of Competency	Elements of Competency	Duration (hours)
SEIP-TEX-RF-01-S	Explore the history of textile sector	<ol style="list-style-type: none"> 1. Examine the background of textile sector. 2. Identify main industries within textile sector. 3. Identify prime local and export markets. 	16
SEIP-TEX-RF-02-S	Use hand tools and power tools	<ol style="list-style-type: none"> 1. Identify and inspect hand and power tools. 2. Use hand tools properly and safely. 3. Operate power tools properly and safely. 4. Clean and maintain hand tools and power tools. 	24
SEIP-TEX-RF-03-S	Read and interpret sketches and drawings	<ol style="list-style-type: none"> 1. Interpret information and specifications. 2. Read and Interpret sketches and drawings. 	8
Total Hours			48

Occupation-specific – Compulsory (6 units of competency required)

Code	Unit of Competency	Elements of Competency	Duration (hours)
SEIP-TEX-RF-01-O	Interpret the basics of ring frame	<ol style="list-style-type: none"> 1. Understand the ring frame process. 2. Identify machine and machine specifications. 3. Identify parts and functions of machine. 4. Interpret technical terms. 	24
SEIP-TEX-RF-02-O	Carry out ring frame operations	<ol style="list-style-type: none"> 1. Collect roving for feeding. 2. Perform creeling, feeding and piecing. 3. Operate ring frame. 4. Clean and maintain the machine. 	88
SEIP-TEX-RF-03-O	Handle the materials	<ol style="list-style-type: none"> 1. Perform doffing operation. 2. Handle packages and trolley. 3. Dispose of waste material. 	64
SEIP-TEX-RF-04-O	Understand drafting system and drafting zone	<ol style="list-style-type: none"> 1. Explain drafting system. 2. Identify functions of drafting zone. 	32

Code	Unit of Competency	Elements of Competency	Duration (hours)
SEIP-TEX-RF-05-O	Carry out quality control and maintenance	<ol style="list-style-type: none"> 1. Identify roving and yarn faults. 2. Test quality of the material. 3. Carry out maintenance work. 	40
SEIP-TEX-RF-06-O	Carry out production calculations	<ol style="list-style-type: none"> 1. Identify the speed of different parts. 2. Calculate production quantity. 	24
Total Hours			272

Generic Competencies

Unit Title:	Use basic mathematical concepts
Unit Code:	SEIP-TEX-RF-01-G
Nominal Hours:	8 hours
Unit Descriptor:	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.
Elements of Competency	Performance Criteria (<u>bold and underlined</u> terms are elaborated in the Range of Variables)
1. Identify calculation requirements in the workplace	1.1. <u>Calculation requirements</u> are identified from <u>workplace information</u> . 1.2. Mathematical problems are constructed from workplace information.
2. Select appropriate mathematical methods/concepts for the calculation	2.1. <u>Appropriate method</u> 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"> 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. Underpinning knowledge	<ol style="list-style-type: none"> 2.1. Numerical concepts 2.2. Basic mathematical methods such as addition, subtraction, multiplication, division and percentage 2.3. Mathematical language, symbols and terminology 2.4. Measuring units
3. Underpinning skills	<ol style="list-style-type: none"> 3.1. Constructing simple problems from workplace information 3.2. Solving problems using appropriate method, tools and instruments 3.3. Using appropriate tools and instruments

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.

4. Underpinning attitudes

- 4.1. Prompt in carrying out activities
- 4.2. Tidy and punctual
- 4.3. Respectful of peers, subordinates and seniors in the workplace
- 4.4. Safely use tools and equipment
- 4.5. Sincere and honest concerning duties

5. Resource implications

The following resources must be provided:

- 5.1. Workplace (simulated or actual)
- 5.2. Calculator
- 5.3. Cell phone
- 5.4. Computer/laptop/notebook
- 5.5. Measuring tape
- 5.6. Ruler
- 5.7. Projector
- 5.8. Stationary
- 5.9. Learning manual

6. Methods of assessment

Methods of assessment may include but is not limited to:

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

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.

Unit Title:	Apply occupational health and safety (OHS) practice in the workplace
Unit Code:	SEIP-TEX-RF-02-S
Nominal Hours:	8 hours
Unit Descriptor:	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.
Elements of Competency	Performance Criteria (<u>bold and underlined</u> terms are elaborated in the Range of Variables)
1. Identify OHS policies and procedures	<p>1.1. <u>OHS policies</u> 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 <u>personal protective equipment (PPE)</u>.</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. <u>Emergency response plans and procedures</u> are responded to.</p> <p>4.3. <u>First aid procedures</u> during emergency situations are identified.</p>

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

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.

4. Underpinning attitudes	4.1. Committed to occupational health and safety practices 4.2. Communicates well with peers, subordinates and seniors in workplace 4.3. Prompt in carrying out activities 4.4. Tidy and punctual 4.5. Sincere and honest concerning duties 4.6. Responsible during emergencies
5. Resource implications	The following resources must be provided: 5.1. Workplace (simulated or actual) 5.2. Personal protective equipment (PPE) 5.3. Firefighting equipment 5.4. Emergency response manual 5.5. First aid kits 5.6. Projector 5.7. Stationary 5.8. Learning manual
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

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.

Unit Title:	Carry out workplace interaction
Unit Code:	SEIP-TEX-RF-03-G
Nominal Hours:	8 hours
Unit Descriptor:	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.
Elements of Competency	Performance Criteria (<u>bold and underlined</u> 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 <u>courteous manner</u> to gather and convey information.</p> <p>1.4. <u>Workplace procedures and matters</u> 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 <u>appropriate sources</u>.</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"> 1.1. Interpreted workplace communication and etiquette 1.2. Interpreted workplace instructions and symbols 1.3. Performed active participation in workplace meetings
2. Underpinning knowledge	<ol style="list-style-type: none"> 2.1. Workplace communication and etiquette 2.2. Workplace documents, signs and symbols 2.3. Meeting procedure and etiquette 2.4. Professional ethics
3. Underpinning skills	<ol style="list-style-type: none"> 3.1. Demonstrating workplace communication and etiquette 3.2. Interpreting workplace instructions and symbols 3.3. Demonstrating active participation in workplace meeting 3.4. Applying professional ethics at work

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.

4. Underpinning attitudes	4.1. Prompt in carrying out activities 4.2. Tidy and punctual 4.3. Respectful of peers, subordinates and seniors in the workplace 4.4. Concerned about the work environment 4.5. Sincere and honest concerning duties
5. Resource implications	The following resources must be provided: 5.1. Workplace (simulated or actual) 5.2. Workplace procedures 5.3. Standard operating procedure 5.4. Workplace documents, signs and symbols 5.5. Codes of conduct 5.6. Projector 5.7. Stationary 5.8. Learning manual
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

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.

Unit Title:	Operate in a team environment
Unit Code:	SEIP-TEX-RF-04-G
Nominal Hours:	8 hours
Unit Descriptor:	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.
Elements of Competency	Performance Criteria (<u>bold and underlined</u> 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 <u>sharing information</u> 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

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.

Unit Title:	Apply basic IT skills
Unit Code:	SEIP-TEX-RF-05-G
Nominal Hours:	8 hours
Unit Descriptor:	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.
Elements of Competency	Performance Criteria (<u>bold and underlined</u> 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 IT tools 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. Data manipulation techniques 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 <u>browsers</u> 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 (<i>may include but not limited to</i>)
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"> 1.1. Identified commonly used IT tools 1.2. Performed simple trouble-shooting with computer 1.3. Performed typing on word processing software, saved and retrieved documents 1.4. Performed data entry with spreadsheet 1.5. Used email account for different online purposes
2. Underpinning knowledge	<ol style="list-style-type: none"> 2.1. IT and IT tools 2.2. Computer trouble-shooting 2.3. Techniques to access internet

Evidence Guide

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

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

Accreditation Requirements

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Sector-specific Competencies

Unit Title:	Explore the history of Textile Sector
Unit Code:	SEIP-TEX-RF-01-S
Nominal Hours:	16 hours
Unit Descriptor:	This unit covers the skills, knowledge and attitudes required to explore the history of Textile Sector in Bangladesh. It specifically includes examining the background of textile sector, identifying the main industries within the textile sector, and identifying prime local and export markets.
Elements of Competency	Performance Criteria (<u>bold and underlined</u> terms are elaborated in the Range of Variables)
1. Examine the background of textile sector	1.1. The historical background of textile sector is examined and described. 1.2. <u>Steps of textile processing</u> 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 prime local and export markets	3.1. Prime <u>local markets</u> and <u>export markets</u> are identified. 3.2. 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. Dying 1.4. Printing 1.5. Finishing 1.6. Apparel manufacture
2. Local markets	2.1. Processing mills 2.2. Processing factories 2.3. Wholesale markets 2.4. Wholesale retailers
3. Export markets	3.1. Europe 3.2. United States 3.3. Australia

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: 1.1. Illustrated history of Textile sector 1.2. Identified basic steps of textile processing 1.3. Identified prime local and export markets
2. Underpinning knowledge	2.1. History of textile sector 2.2. Steps of textile processing 2.3. Prime local and export markets
3. Underpinning skills	3.1. Describing the history of textile sector 3.2. Identifying steps of textile processing 3.3. Identifying prime local and export markets
4. Underpinning attitudes	4.1. Eager to learn 4.2. Considerate of personal grooming 4.3. Patient and attentive 4.4. Active on team work 4.5. Tidy and punctual 4.6. Sincere and honest concerning duties
5. Resource implications	The following resources must be provided: 5.1. Workplace (simulated or actual) 5.2. Map/globe 5.3. Projector 5.4. Stationary 5.5. Learning manual
6. Methods of assessment	Methods of assessment may include but is not limited to: 6.1. Written test 6.2. Oral test 6.3. Observation 6.4. Demonstration 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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Unit Title:	Use hand and power tools
Unit Code:	SEIP-TEX-RF-02-S
Nominal Hours:	24 hours
Unit Descriptor:	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.
Elements of Competency	Performance Criteria (<u>bold and underlined</u> 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 <u>hand tools</u> 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. <u>Measuring tools</u> 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 <u>power tools</u> 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. <u>Measuring tools</u> 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>

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

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: 1.1. Identified and selected appropriate hand and power tools for work to be performed 1.2. Identified and used measuring and testing tools appropriate to work activity 1.3. Followed safety precautions when using hand and power tools 1.4. Operated power tools safely and pursuant to manufacturer's operating specification 1.5. Performed cleaning and maintenance of hand and power tools after use and prior to storing
2. Underpinning knowledge	2.1. Information on types of hand and power tools, their functions and use 2.2. Procedures for safely using hand and power tools
3. Underpinning skills	3.1. Identifying hand, power and measuring tools 3.2. Following safety precautions when using hand, power and measuring tools 3.3. Using hand and measuring tools correctly and safely in accordance with manufacturer's operating specification 3.4. Operating power tools correctly and safely in accordance with manufacturer's operating specification 3.5. Cleaning and maintaining hand and power tools after use 3.6. Applying appropriate lubricant on hand and power tools after use and prior to storing
4. Underpinning attitudes	4.1. Commitment to occupational health and safety 4.2. Promptness in carrying out activities 4.3. Sincere and honest to duties 4.4. Environmental concerns 4.5. Tidiness and timeliness 4.6. Concerned for proper use of tools
5. Resource implications	The following resources must be provided: 5.1. Workplace (simulated or actual) 5.2. Hand tools 5.3. Power tools 5.4. Measuring tools 5.5. Projector 5.6. Stationary 5.7. 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. Oral test
- 6.3. Observation
- 6.4. Demonstration
- 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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Unit Title:	Read and interpret sketches and drawings
Unit Code:	SEIP-TEX-RF-03-S
Nominal Hours:	8 hours
Unit Descriptor:	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.
Elements of Competency	Performance Criteria (<u>bold and underlined</u> terms are elaborated in the Range of Variables)
1. Interpret information and specifications	1.1. Appropriate <u>manuals</u> for work activity are identified and collected. 1.2. Information and <u>specifications</u> in the manuals is interpreted and applied.
2. Read and interpret sketches and drawings	2.1. Relevant <u>sketches and drawings</u> are identified for job requirement. 2.2. Key <u>terms and abbreviations</u> are identified and interpreted. 2.3. <u>Signs and symbols</u> are identified and interpreted. 2.4. Schedules, dimensions, sketches, 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. Buyers specification 1.2. Compliance 1.3. Maintenance procedure 1.4. Periodic maintenance 1.5. Quality assurance 1.6. Standard operating procedure (SOP)
2. Sketches and drawings	2.1. Technical 2.2. Measurement 2.3. Design
3. Specifications	3.1. Product 3.2. Performance 3.3. Method
4. Terms and abbreviations	4.1. Refers to all terms and abbreviations associated with the Textile Sector
5. Signs and symbols	5.1. Include 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.

1. Critical aspects of competency	Assessment must evidence that the candidate: 1.1. Identified information and specifications 1.2. Read and interpreted sketches and drawings
2. Underpinning knowledge	2.1. Manuals 2.2. Units of measurement 2.3. Units of conversion 2.4. Sketch, drawings and specifications
3. Underpinning skills	3.1. Reading and identifying information and specifications (from manual) 3.2. Reading and interpreting sketches and drawings
4. Underpinning attitudes	4.1. Eager to learn 4.2. Tidy and punctual 4.3. Concerned about proper use of computer and peripherals 4.4. Concerned for other's rights 4.5. Sincere and honest concerning duties
5. Resource implications	The following resources must be provided: 5.1. Workplace (simulated or actual) 5.2. Computer/laptop/notebook 5.3. Software 5.4. Stationary 5.5. Learning manual
6. Methods of assessment	Methods of assessment may include but is not limited to: 6.1. Written test 6.2. Oral test 6.3. Observation 6.4. Demonstration 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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Occupation-specific Competencies

Unit Title:	Interpret the basics of ring frame
Unit Code:	SEIP-TEX-RF-01-O
Nominal Hours:	24 hours
Unit Descriptor:	This unit covers the skills, knowledge, and attitudes required to interpret the basics of ring frame. It specifically includes understanding the ring frame process, identifying machine and machine specifications, identifying parts and functions of machine, and interpreting technical terms commonly used in the workplace.
Elements of Competency	Performance Criteria (<u>bold and underlined</u> terms are elaborated in the Range of Variables)
1. Understand the ring frame process	1.1. Production process of ring frame is identified and explained. 1.2. Functions of ring frame are identified and described. 1.3. Role of a ring frame operator is explained.
2. Identify machine and machine specifications	2.1. Origin, brand and model of the machine is identified. 2.2. Number of spindles of the machine are identified. 2.3. Spindle speed of the machine is identified.
3. Identify parts and functions of machine	3.1. <u>Different parts</u> of machine are identified and located. 3.2. Function of different parts of machine are explained.
4. Interpret technical terms	4.1. <u>Technical terms</u> used in spinning process are identified. 4.2. Technical terms are interpreted.

Range of Variables	
Variable	Range (<i>may include but not limited to</i>)
1. Different parts	1.1. Spacer 1.2. Apron 1.3. Cradle 1.4. Spindle 1.5. Ring cup 1.6. Ring traveller 1.7. Hand brake/knee brake 1.8. Cot roller 1.9. Steel roller 1.10. Roving guide 1.11. Lappet

Range of Variables	
Variable	Range (may include but not limited to)
2. Technical terms	2.1. Creeling 2.2. Drafting 2.3. Twisting 2.4. Piecing 2.5. Building 2.6. Winding 2.7. Doffing

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"> 1.1. Understood the production process of ring frame 1.2. Identified different parts of machine 1.3. Described function of different parts of machine
2. Underpinning knowledge	<ol style="list-style-type: none"> 2.1. Production process of ring frame 2.2. Functions of ring frame 2.3. Different parts and functions of machine 2.4. Technical terms used in textile sector
3. Underpinning skills	<ol style="list-style-type: none"> 3.1. Identifying different parts of machine 3.2. Describing function of different parts of machine
4. Underpinning attitudes	<ol style="list-style-type: none"> 4.1. Eager to learn 4.2. Active on teamwork 4.3. Patient and attentive 4.4. Prompt in carrying out activities 4.5. Tidy and punctual 4.6. Respectful of peers, subordinates and seniors in the workplace
5. Resource implications	The following resources must be provided: <ol style="list-style-type: none"> 5.1. Workplace (simulated or actual) 5.2. Tools, equipment and machines 5.3. Information and specifications 5.4. Projector 5.5. Stationary 5.6. 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.** Oral test
- 6.3.** Observation
- 6.4.** Demonstration
- 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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Unit Title:	Carry out ring frame operations
Unit Code:	SEIP-TEX-RF-02-O
Nominal Hours:	88 hours
Unit Descriptor:	This unit covers the skills, knowledge, and attitudes required to carry out ring frame operations. It specifically includes collecting roving for feeding, performing creeling, feeding and piecing, operating ring frame machine, and cleaning and maintaining the machine.
Elements of Competency	Performance Criteria (<u>bold and underlined</u> terms are elaborated in the Range of Variables)
1. Collect roving for feeding	1.1. Appropriate <u>personal protective equipment (PPE)</u> is identified and selected. 1.2. Simplex bobbins of roving are identified and collected. 1.3. Rovings are stored as per standard operating procedure.
2. Perform creeling, feeding and piecing	2.1. Simplex bobbins of rovings are creeled as per standard operating procedure. 2.2. Simplex bobbins of rovings are fed into machine. 2.3. Rovings are pieced when required.
3. Operate ring frame	3.1. <u>Hand tools</u> are identified and selected as per job requirement. 3.2. <u>Control points</u> are identified. 3.3. Starting and stopping of machines is performed as per standard operating procedure. 3.4. Yarns are pieced when required as per standard operating procedure. 3.5. <u>Block of the materials</u> are identified and separated.
4. Clean and maintain the machine	4.1. Machine parts are cleaned as per manufacturer instructions. 4.2. <u>Drafting zone</u> is cleaned as per standard operating procedure.

Range of Variables	
Variable	Range (<i>may include but not limited to</i>)
1. PPE	1.1. Apron 1.2. Mask 1.3. Ear plugs 1.4. Safety shoes

Range of Variables	
Variable	Range (may include but not limited to)
2. Hand tools	2.1. Allen key 2.2. Wrench box 2.3. Vernier calliper 2.4. Spanner ring 2.5. Pliers 2.6. Screwdrivers (star, negative, positive) 2.7. File 2.8. Hammer 2.9. Tacho meter 2.10. Puller 2.11. Pliers
3. Control points	3.1. Brake system 3.2. Feed zone 3.3. Delivery zone 3.4. Start and stop system 3.5. Drafting zone
4. Block of the materials	4.1. Materials in a 'lot' of different count 4.2. Materials in a 'lot' of same count 4.3. Different fibres in a 'lot' 4.4. Same fibres in a 'lot'
5. Drafting zone	5.1. Steel roller (back, front and middle roller) 5.2. Cradle 5.3. Roving guide 5.4. Spacer 5.5. Apron

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"> 1.1. Applied OHS practices in the workplace 1.2. Carried out creeling, feeding and piecing 1.3. Performed starting and stopping the machine 1.4. Managed block of the materials
2. Underpinning knowledge	<ol style="list-style-type: none"> 2.1. Standard operating procedures of ring frame 2.2. Control points of machine 2.3. Cleaning and maintaining procedure of machine

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.

3. Underpinning skills	3.1. Identifying and collecting roving from machine 3.2. Performing creeling, feeding and piecing 3.3. Operating the machine as per standard operating procedure 3.4. Cleaning and maintaining the machine as per standard operating procedure
4. Underpinning attitudes	4.1. Eager to learn 4.2. Active on teamwork 4.3. Patient and attentive 4.4. Prompt in carrying out duties 4.5. Concerned for working environment 4.6. Tidy and punctual 4.7. Respectful of peers, subordinates and seniors in the workplace 4.8. Communicate with peers and seniors in the workplace
5. Resource implications	The following resources must be provided: 5.1. Workplace (simulated or actual) 5.2. Personal protective equipment (PPE) 5.3. Tools, equipment and machinery 5.4. Materials 5.5. Manuals 5.6. Standard operating procedure 5.7. Storage area 5.8. Projector 5.9. Stationary 5.10. Learning manual
6. Methods of assessment	Methods of assessment may include but is not limited to: 6.1. Written test 6.2. Oral test 6.3. Observation 6.4. Demonstration 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.

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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Unit Title:	Handle the materials
Unit Code:	SEIP-TEX-RF-03-O
Nominal Hours:	64 hours
Unit Descriptor:	This unit covers the knowledge, skills and attitudes required to handle the materials. It specifically includes performing doffing operation, handling packages and trolley, and collecting and disposing of waste material.
Elements of Competency	Performance Criteria (<u>bold and underlined</u> terms are elaborated in the Range of Variables)
1. Perform doffing operation	1.1. Ring cops are doffed. 1.2. Ring bobbins are placed in the machine as per standard operating procedure.
2. Handle packages and trolley	2.1. Ring cops are collected. 2.2. Ring bobbins are collected and stored as per standard operating procedure. 2.3. Roving trolley and basket are cleaned.
3. Dispose of waste material	3.1. <u>Waste material</u> from machine is identified. 3.2. Waste materials are separated and disposed of as per standard operating procedure.

Range of Variables	
Variable	Range (<i>may include but not limited to</i>)
1. Waste material	1.1. Roving 1.2. Thread 1.3. Sweeping 1.4. Fly dust 1.5. Pneumafil 1.6. Bonda

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: 1.1. Performed doffing operations 1.2. Handled packages and trolley appropriately 1.3. Collected and disposed of waste material correctly
2. Underpinning knowledge	2.1. Procedure for doffing 2.2. Procedure for handling packages and trolley 2.3. Process for disposing of waste

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.

3. Underpinning skills	<ul style="list-style-type: none">3.1. Doffing the ring cops and ring bobbins3.2. Collecting and storing the packages3.3. Collecting and disposing of waste material
4. Underpinning attitudes	<ul style="list-style-type: none">4.1. Committed to occupational health and safety practices4.2. Eager to learn4.3. Concerned for working environment4.4. Tidy and punctual4.5. Respectful of peers, subordinates and seniors in the workplace4.6. Communicate with peers and seniors in the workplace
5. Resource implications	<p>The following resources must be provided:</p> <ul style="list-style-type: none">5.1. Workplace (simulated or actual)5.2. Personal protective equipment (PPE)5.3. Tools, equipment and machinery5.4. Materials5.5. Storage area5.6. Projector5.7. Stationary5.8. Learning manual
6. Methods of assessment	<p>Methods of assessment may include but is not limited to:</p> <ul style="list-style-type: none">6.1. Written test6.2. Oral test6.3. Observation6.4. Demonstration6.5. Portfolio
7. Context of assessment	<ul style="list-style-type: none">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.

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Unit Title:	Understand drafting system and drafting zone
Unit Code:	SEIP-TEX-RF-04-O
Nominal Hours:	32 hours
Unit Descriptor:	This unit covers the skills, knowledge, and attitudes required to understand drafting system and drafting zone. It specifically includes explaining the drafting system and identifying the functions of drafting zone.
Elements of Competency	Performance Criteria (<u>bold and underlined</u> terms are elaborated in the Range of Variables)
1. Explain drafting system	1.1. <u>Drafting systems</u> are identified and explained. 1.2. Working procedure of drafting system is described.
2. Identify functions of drafting zone	2.1. <u>Parts of drafting zone</u> are identified. 2.2. Functions of different parts of drafting zone are explained. 2.3. Functions of drafting zone is described.

Range of Variables	
Variable	Range (<i>may include but not limited to</i>)
1. Drafting systems	1.1. Regular drafting 1.2. Apron drafting 1.3. 3 over 3 drafting 1.4. 4 over 3 drafting 1.5. 4 over 4 drafting
2. Parts of drafting zone	2.1. Spacer 2.2. Apron 2.3. Cradle 2.4. Back roller

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 requires the evidence that the candidate: 1.1. Identified and explained drafting system 1.2. Identified and described the functions of drafting zone
2. Underpinning knowledge	2.1. Systems of drafting 2.2. Working procedure of drafting system 2.3. Parts and their function of drafting zone 2.4. Functions of drafting zone

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.

3. Underpinning skills	<ul style="list-style-type: none">3.1. Identifying and explaining drafting system3.2. Describing the functions of drafting zone and its parts
4. Underpinning attitudes	<ul style="list-style-type: none">4.1. Committed to occupational health and safety practices4.2. Eager to learn4.3. Active on teamwork4.4. Patient and attentive4.5. Concerned for environment4.6. Tidy and punctual4.7. Respectful of peers, subordinates and seniors in the workplace4.8. Communicate with peers and seniors in the workplace
5. Resource implications	<p>The following resources must be provided:</p> <ul style="list-style-type: none">5.1. Workplace (simulated or actual)5.2. Personal protective equipment (PPE)5.3. Tools, equipment and machinery5.4. Materials5.5. Storage area5.6. Projector5.7. Stationary5.8. Learning manual
6. Methods of assessment	<p>Methods of assessment may include but is not limited to:</p> <ul style="list-style-type: none">6.1. Written test6.2. Oral test6.3. Observation6.4. Demonstration6.5. Portfolio
7. Context of assessment	<ul style="list-style-type: none">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.

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Unit Title:	Carry out quality control and maintenance
Unit Code:	SEIP-TEX-RF-05-O
Nominal Hours:	40 hours
Unit Descriptor:	This unit covers the skills, knowledge, and attitudes required to carry out quality control and maintenance. It specifically includes identifying roving and yarn faults, testing the quality of the material, and carrying out maintenance work.
Elements of Competency	Performance Criteria (<u>bold and underlined</u> terms are elaborated in the Range of Variables)
1. Identify roving and yarn faults	1.1. <u>Roving and yarn faults</u> are identified. 1.2. Offending materials are collected and separated. 1.3. Identified faults are reported to appropriate authority.
2. Test quality of material	2.1. Materials quality is identified and established. 2.2. Yarn properties are tested. 2.3. Test results are reported to appropriate authority.
3. Carry out maintenance work	3.1. <u>Maintenance issues</u> are identified and reported. 3.2. <u>Maintenance schedule</u> is followed. 3.3. Simple maintenance work is performed as required.

Range of Variables	
Variable	Range (<i>may include but not limited to</i>)
1. Roving and yarn faults	1.1. Roving faults: 1.1.1. Irregular roving 1.1.2. Slack package 1.1.3. Stretched roving 1.1.4. Dirt and oil strained roving 1.1.5. Slubs 1.2. Yarn faults: 1.2.1. Thick and thin place 1.2.2. Neps 1.2.3. Slubs 1.2.4. Hairiness 1.2.5. Count mixing 1.2.6. Bad piecing 1.2.7. Long piecing 1.3. Double ended piecing

Range of Variables	
Variable	Range (may include but not limited to)
2. Maintenance schedule	2.1. Cleaning 2.2. Lubricating 2.3. Gauging 2.4. Setting 2.5. Adjustments
3. Maintenance issues	3.1. Bearing damage 3.2. Gear teeth damage 3.3. Electrical faults 3.4. Mechanical faults

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"> 1.1. Identified roving and yarn faults 1.2. Identified testing procedure 1.3. Carried out simple maintenance
2. Underpinning knowledge	<ol style="list-style-type: none"> 2.1. Roving and yarn faults 2.2. Yarn properties 2.3. Testing procedures 2.4. Maintenance schedules and issues
3. Underpinning skills	<ol style="list-style-type: none"> 3.1. Identifying roving and yarn faults 3.2. Performing maintenance according to schedule 3.3. Carrying out simple maintenance
4. Underpinning attitudes	<ol style="list-style-type: none"> 4.1. Committed to occupational health and safety practices 4.2. Eager to learn 4.3. Active on team work 4.4. Patient and attentive 4.5. Tidy and punctual 4.6. Respectful of peers, subordinates and seniors in the workplace 4.7. Communicate with peers 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.

5. Resource implications	The following resources must be provided: 5.1. Workplace (simulated or actual) 5.2. Personal protective equipment (PPE) 5.3. Tools, equipment and machinery 5.4. Materials 5.5. Projector 5.6. Stationary 5.7. Learning manual
6. Methods of assessment	Methods of assessment may include but is not limited to: 6.1. Written test 6.2. Oral test 6.3. Observation 6.4. Demonstration 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.

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Unit Title:	Carry out production calculations
Unit Code:	SEIP-TEX-RF-06-O
Nominal Hours:	24 hours
Unit Descriptor:	This unit covers the skills, knowledge, and attitudes required to carry out production calculations. It specifically includes identifying the speed of different parts and calculating production quantity of ring frame.
Elements of Competency	Performance Criteria (<u>bold and underlined</u> terms are elaborated in the Range of Variables)
1. Identify the speed of different parts	1.1. Spindle speed is identified. 1.2. Twist per inch (TPI) is identified.
2. Calculate production quantity	2.1. Number of spindles are identified. 2.2. <u>Machine efficiency</u> is determined. 2.3. Production rate of ring frame is calculated according to <u>formula</u> .

Range of Variables	
Variable	Range (<i>may include but not limited to</i>)
1. Machine efficiency	1.1. Calculated production 1.2. Actual production
2. Formula	2.1. Production calculation formula 2.2. Efficiency calculation formula

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: 1.1. Determined machine efficiency 1.2. Calculated production rate
2. Underpinning knowledge	2.1. Identify spindle speed and twist per inch (TPI) 2.2. Determine machine efficiency 2.3. Calculate production rate as per formula
3. Underpinning skills	3.1. Identifying spindle speed and twist per inch (TPI) 3.2. Determining machine efficiency 3.3. Calculating production rate as per formula

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.

4. Underpinning attitudes	<ul style="list-style-type: none">4.1. Eager to learn4.2. Tidy and punctual4.3. Patient and attentive4.4. Prompt in carrying out activities4.5. Concerned with the proper use of computers and peripherals4.6. Sincere and honest concerning duties
5. Resource implications	The following resources must be provided: <ul style="list-style-type: none">5.1. Workplace (simulated or actual)5.2. Computer/laptop/notebook5.3. Calculator5.4. Tacho meter5.5. Projector5.6. Stationary5.7. Learning manual
6. Methods of assessment	Methods of assessment may include but is not limited to: <ul style="list-style-type: none">6.1. Written test6.2. Oral test6.3. Observation6.4. Demonstration6.5. Portfolio
7. Context of assessment	<ul style="list-style-type: none">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.

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