



COMPETENCY STANDARD FOR QUALITY CONTROL OF DYEING AND PRINTING FOR WOVEN

(RMG & Textile Sector)

Level: 03

Competency Standard Code: CS-RMGT-QCDPW-L3-EN-V1



**National Skills Development Authority
Prime Minister's Office
Government of the People's Republic of Bangladesh**

Copyright

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This Competency Standard for Occupation 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 to meet the qualification of individuals who graduated through the established standard via competency-based assessment for a relevant job.

This document has been developed by NSDA in association with RMG & Textile Sector, industry representatives, academia, related specialist, trainer and related employee.

Public and private institutions may use the information contained in this standard for activities benefitting Bangladesh.

Introduction

The NSDA aims to enhance an individual's employability by certifying completeness with skills. NSDA works to expand the skilling capacity of identified public and private training providers qualitatively and quantitatively. It also aims to establish and operationalize a responsive skills ecosystem and delivery mechanism through a combination of well-defined set of mechanisms and necessary technical supports.

Key priority economic growth sectors identified by the government have been targeted by NSDA to improve current job skills along with 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 program. "**Quality Control of Dyeing and Printing for Woven**" is selected as one of the priority occupations of **RMG & Textile** Sector. This standard is developed to adopt a demand driven approach to training with effective inputs from Industry Skills Councils (ISC's), employer associations and employers.

Generally, a competency standard informs curriculum, learning materials, assessment and certification of trainees enrolled in Skills Training. Trainees who successfully pass the assessment will receive a qualification in the National Skills Qualification Framework (NSQF) under Bangladesh National Qualification Framework and will be listed on the NSDA's online portal.

This competency standard 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. A series of stakeholder consultations, workshops were held to develop this document.

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 representative from NSDA, Key Institutions, ISC, and industry experts to identify the competencies required of an occupation in Informal Sector.

Competency standards describe the skills, knowledge and attitude needed to perform effectively in the workplace. CS acknowledge that people can achieve technical and vocational competency in many ways by emphasizing 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

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 Standards for National Skill Certificate, Level-03 in
Quality Control of Dyeing and Printing for Woven in RMG & Textile Sector**

Level Descriptors of NSQF (BNQF 1-6)

Level & Job classification	Knowledge Domain	Skills Domain	Responsibility Domain
6-Mid-Level Manager/ Sub Assistant Engineer	Comprehensive actual and theoretical knowledge within a specific work or study area with an awareness of the validity and limits of that knowledge, able to analyse, compare, relate and evaluate.	Specialised and wider range of cognitive and practical skills required to provide leadership in the development of creative solutions to defined problems. Communicate professional issues and solutions to the team and to external partners/users.	Work under broad guidance and self-motivation to execute strategic and operational plan/s. Lead lower-level management. Diagnose and resolve problems within and among work groups.
5-Supervisor	Broad knowledge of the underlying, concepts, principles, and processes in a specific work or study area, able to scrutinize and break information into parts by identifying motives or causes.	Broad range of cognitive and practical skills required to generate solutions to specific problems in one or more work or study areas. Communicate practice-related problems and possible solutions to external partners.	Work under guidance of management and self-direction to resolve specific issues. Lead and take responsibility for the work and actions of group/team members. Bridge between management.
4-Highly Skilled Worker	Broader knowledge of the underlying, concepts, principles, and processes in a specific work or study area, able to solve problems to new situations by comparing and applying acquired knowledge.	A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying the full range of methods, tools, materials and information. Communicate using technical terminology and IT technology with partners and users as per workplace requirements.	Work under minimal supervision in specific contexts in response to workplace requirements. Resolve technical issues in response to workplace requirements and lead/guide a team/ group.
3-Skilled Worker	Moderately broad knowledge in a specific work or study area, able to perceive ideas and abstract from drawing and design according to workplace requirements.	Basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools. Communicate with his team and limited external partners upholding the values, nature and culture of the workplace	Work or study under supervision with considerable autonomy. Participate in teams and responsible for group coordination.
2-Semi Skilled Worker	Basic understanding of underpinning knowledge in a specific work or study area, able to interpret and apply common occupational terms and instructions.	Skills required to carry out simple tasks, communicate with his team in the workplace presenting and discussing results of his work with required clarity.	Work or study under supervision in a structured context with limited scope of manipulation
1 –Basic Skilled Worker	Elementary understanding of ability to interpret the underpinning knowledge in a specific study area, able to interpret common occupational terms and instructions.	Specific Basic skills required to carry out simple tasks. Interpret occupational terms and present the results of own work within guided work environment/ under supervision.	Work under direct supervision in a structured context with limited range of responsibilities.

List of Abbreviations

CS	- Competency Standard
ISC	- Industry Skills Council
NSDA	- National Skills Development Authority
NSQF	- National Skills Qualifications Framework
OSH	- Occupational Safety and Health
PPE	- Personal Protective Equipment
SCVC	- Standards and Curriculum Validation Committee
STP	- Skills Training Provider
SOP	- Standard Operating Procedure
UoC	- Unit of Competency

Approved by

---th Executive Committee (EC) Meeting of NSDA

Held on -----

Md. Saniul Ferdous
Deputy Director (Admin)
and
Assigned Officer for Authority and EC meeting
National Skills Development Authority

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**Competency Standards for National Skill Certificate, Level-03 in
Quality Control of Dyeing and Printing for Woven in RMG & Textile Sector**

Course Structure

SL No	Unit code and Title	UOC Level	Nominal (hours)
Generic Units of Competencies			
1.	GU002L2V1	Apply Occupational Safety and Health (OSH) Procedure in the Workplace	2 15
2.	GU008L2V1	Work In a Team Environment	2 20
3.	GU019L2V1	Participate in Workplace Communication	2 10
Sub Total			45
Sector Specific Units of Competencies			
4.	SU-RMGT-01-L2-V1	Explore the History of Textile Sector	2 15
5.	SU-RMGT-02-L2-V1	Perform Measurement and Calculations	2 15
6.	SU-RMGT-03-L2-V1	Apply Quality Procedures	2 20
Sub Total			50
Occupation Specific Units of Competencies			
7.	OU- RMGT-QCDPW-01-L3-V1	Interpret Quality Control Process for Dyeing and Printing	3 55
8.	OU- RMGT-QCDPW-02-L3-V1	Perform Grey Fabric Inspection	3 50
9.	OU- RMGT-QCDPW-03-L3-V1	Perform Quality Control for Dyeing	3 80
10.	OU- RMGT-QCDPW-04-L3-V1	Perform Quality Control for Printing	3 80
Sub Total			265
Total Duration			360

Units & Elements at Glance

Generic Competencies

Code	Unit of competency	Elements of competency	Duration (hours)
GU002L2V1	Apply Occupational Safety and Health (OSH) procedure In the Workplace	<ol style="list-style-type: none"> 1. Identify OSH policies and procedures 2. Follow OSH procedure 3. Report hazards and risks 4. Respond to emergencies 5. Maintain personal well-being 	15
GU008L2V1	Work in a Team Environment	<ol style="list-style-type: none"> 1. Define team role and scope 2. Identify individual role and responsibility 3. Participate in team discussions 4. Work as a team member 	20
GU019L2V1	Participate in Workplace Communication	<ol style="list-style-type: none"> 1. Obtain and convey workplace information 2. Speak English at a basic operational level 3. Participate in workplace meetings and discussions 4. Complete relevant work-related documents 	10
Total hours			45

Sector specific competencies

Code	Unit of competency	Elements of competency	Duration (hours)
SU-RMGT-01-L2-V1	Explore the History of Textile Sector	<ol style="list-style-type: none"> 1. Examine the background of textile sector 2. Identify main industries with in textile sector 3. Identify prime local and export markets 	15
SU-RMGT-02-L2-V1	Perform Measurement and Calculations	<ol style="list-style-type: none"> 1. Identify and check measuring instruments 2. Carry out measurements 3. Interpret simple calculations 4. Maintain measuring instruments 	15
SU-RMGT-03-L2-V1	Apply Quality Procedures	<ol style="list-style-type: none"> 1. Identify quality procedures 2. Follow quality procedures 3. Maintain standard procedures 	20
Total hours			50

Occupation specific competencies

Code	Unit of competency	Elements of competency	Duration (hours)
OU- RMGT-QCDPW-01-L3-V1	Interpret Quality Control Process for Dyeing and Printing	<ol style="list-style-type: none"> 1. Classify woven fabrics 2. Define dyeing and printing terminologies 3. Describe process of dyeing 4. Describe process of printing 	55
OU- RMGT-QCDPW-02-L3-V1	Perform Grey Fabric Inspection	<ol style="list-style-type: none"> 1. Identify grey fabric defects 2. Inspect grey fabric 3. Report on grey fabric inspection 	50
OU- RMGT-QCDPW-03-L3-V1	Perform Quality Control of Dyeing	<ol style="list-style-type: none"> 1. Identify dyeing defects 2. Perform tests in pre-treatment process 3. Perform online quality control in dyeing 4. Perform tests on dyed fabric 5. Perform final inspection on dyed fabric 	80
OU- RMGT-QCDPW-04-L3-V1	Perform Quality Control of Printing	<ol style="list-style-type: none"> 1. Identify printing defects 2. Perform online quality control in printing 3. Perform tests on printed fabric 4. Perform final inspection on printed fabric 	80
Total Hours			265

Generic Units of Competencies

Unit Code and Title	GU002L2V1: Apply Occupational Safety and Health (OSH) Procedure in the Workplace
Unit Descriptor	This unit covers the knowledge, skills and attitudes (KSA) required in applying occupational safety and health (OSH) procedure in the workplace. It specifically includes identify OSH policies and procedures, follow OSH procedure, report hazards and risks, respond to emergencies and maintain personal well-being.
Nominal Hours	15 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables
1. Identify OSH policies and procedures	1.1. <u>OSH policies</u> and <u>safe operating procedures</u> are accessed and stated 1.2. <u>Safety signs and symbols</u> are identified and followed 1.3. Emergency response, evacuation procedures and other contingency measures are determined according to workplace requirements
2. Follow OSH procedure	2.1 <u>Personal protective equipment (PPE)</u> is selected and collected as required 2.2 Personal protective equipment (PPE) is correctly used in accordance with organization OSH procedures and practices 2.3 A clear and tidy workplace is maintained as per workplace standard 2.4 PPE is maintained to keep them operational and compliant with OSH regulations
3. Report hazards and risks	3.1 <u>Hazards</u> and risks are identified, assessed and controlled 3.2 Incidents arising from hazards and risks are reported to designated authority
4. Respond to emergencies	4.1 Alarms and warning devices are responded 4.2 Workplace <u>emergency procedures</u> are followed 4.3 <u>Contingency measures</u> during workplace accidents, fire and other emergencies are recognized and followed in accordance with organization procedures 4.4 First aid procedures are applied during emergency situations
5. Maintain personal well-being	5.1 OSH policies and procedures are adhered to OSH awareness programs are participated in as per workplace guidelines and procedures. 5.2 Corrective actions are implemented to correct unsafe condition in the workplace

	5.3 “Fit to work” records are updated and maintained according to workplace requirements
Range of Variables	
Variables	Range (may include but not limited to):
1. OSH policies	1.1. Bangladesh standards for OSH 1.2. Fire Safety Rules and Regulations 1.3. Code of Practice 1.4. Industry Guidelines
2. Safe operating procedures	2.1 Orientation on emergency exits, fire extinguishers, fire escape, etc. 2.2 Emergency procedures 2.3 First Aid procedures 2.4 Tagging procedures 2.5 Use of PPE 2.6 Safety procedures for hazardous substances
3. Safety signs and symbols	3.1 Direction signs (exit, emergency exit, etc.) 3.2 First aid signs 3.3 Danger Tags 3.4 Hazard signs 3.5 Safety tags 3.6 Warning signs
4. Personal Protective Equipment (PPE)	4.1 Gas Mask 4.2 Gloves 4.3 Safety boots 4.4 Face mask 4.5 Overalls 4.6 Goggles and safety glasses 4.7 Sun block 4.8 Chemical/Gas detectors
5. Hazards	5.1 Chemical hazards 5.2 Biological hazards 5.3 Physical Hazards 5.4 Mechanical and Electrical Hazard 5.5 Mental hazard 5.6 Ergonomic hazard
6. Emergency procedures	6.1 Fire fighting 6.2 Earthquake 6.3 Medical and first aid 6.4 Evacuation

7. Contingency measures	7.1 Evacuation 7.2 Isolation 7.1 Decontamination
8. "Fit to Work" records	8.1 Medical Certificate every year 8.2 Accident reports, if any 8.3 Eye vision certificate
Evidence Guide	
The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency	
1. Critical aspects of competency	Assessment required evidence that the candidate: 1.1 stated OSH policies and safe operating procedures 1.2 followed safety signs and symbols 1.3 used personal protective equipment (PPE) 1.4 maintained workplace clear and tidy 1.5 assessed and Controlled hazards 1.6 followed emergency procedures 1.7 followed contingency measures 1.8 implemented corrective actions
2. Underpinning knowledge	2.1 Define OSH 2.2 OSH Workplace Policies and Procedures 2.3 Work Safety Procedures 2.4 Emergency Procedures 2.5 Hazard control procedure 2.6 Different types of Hazards 2.7 PPE and there uses 2.8 Personal Hygiene Practices 2.9 OSH Awareness
3. Underpinning skills	3.1 Accessing OSH policies 3.2 Handling of PPE 3.3 Handling cleaning tools and equipment 3.4 Writing report 3.5 Responding to emergency procedures
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Sincere and honest to duties 4.3 Promptness in carrying out activities 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect of peers and seniors in workplace 4.8 Communicate with peers and seniors in workplace
5. Resource implications	5.1 Workplace

	5.2 Equipment and outfits appropriate in applying safety measures 5.3 Tools, equipment, materials and documentation required 5.4 OSH Policies and Procedures
6. Methods of assessment	Competency should be assessed by: 6.1 Written test 6.2 Demonstration 6.3 Oral Questioning
7. Context of assessment	7.1 Competency assessment must be done in NSDA accredited assessment centre 7.2 Assessment should be done by a NSDA certified/nominated assessor
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by National Skills Development Authority (NSDA), 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 qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.</p>	

Unit Code and Title	GU008L2V1: Work in a Team Environment
Unit Descriptor	This unit covers the knowledge, skills and attitudes (KSAs) required in working in a team environment. It includes define team role and scope, identify individual role and responsibility, participate in team discussions and work as a team member.
Nominal Hours	20 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables
1. Define team role and scope	1.1. Role and objectives of the team are defined 1.2. Team structure, responsibilities and reporting relations are identified from team discussions and other external sources
2. Identify individual role and responsibility	2.1 Individual roles and responsibilities of <u>team members</u> are identified 2.2 Reporting relationships among team members are defined and clarified 2.3 Reporting relationships external to the team are defined and clarified
3. Participate in team discussions	3.1 Ideas related to team plans are contributed 3.2 Recommendations for improving team work are put forward
4. Work as a team member	4.1 Effective forms of communication are used to interact with team members 4.2 Communication channels are followed 4.3 OHS practices are followed
Range of Variables	
Variables	Range (may include but not limited to):
1. Team Members	1.1 Coach/mentor 1.2 Supervisor/Manager 1.3 Peers/Colleagues 1.4 Employee representative
Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency	
1. Critical aspects of competency	Assessment required evidence that the candidate: 1.1 demonstrated knowledge in working in a team environment.

	1.2 satisfied the requirements mentioned in the 1.3 Performance Criteria and Range of Variables
2. Underpinning knowledge	2.1 Team Structure, Role and Responsibility 2.2 Individual Members' Roles and Responsibilities 2.3 Communication Flow and Reporting Structures 2.4 Team Planning 2.5 Interpersonal Communication Skills 2.6 Team Meeting Procedures 2.7 OHS Practices
3. Underpinning skills	3.1 Identifying the role and responsibility of the team 3.2 Identifying roles and responsibilities of individual members 3.3 Participating in team discussions 3.4 Working as a team member
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Sincere and honest to duties 4.3 Promptness in carrying out activities 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect of peers and seniors in workplace 4.8 Communicate with peers and seniors in workplace
5. Resource implications	5.1 Pens 5.2 Telephone 5.3 Computer 5.4 Writing materials 5.5 Online communication
6. Methods of assessment	Competency should be assessed by: 6.1 Written test 6.2 Demonstration 6.3 Oral Questioning
7. Context of assessment	7.1 Competency assessment must be done in NSDA accredited assessment centre 7.2 Assessment should be done by a NSDA certified/nominated assessor

Accreditation Requirements

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Unit Code and Title	GU019L2V1: Participate in Workplace Communication
Unit Descriptor	<p>This unit covers the knowledge, skills and attitudes required to participate in workplace communication.</p> <p>It specifically includes obtain and convey workplace information, speak English at a basic operational level, Participate in workplace meetings and discussions and complete relevant work-related documents</p>
Nominal Hours	10 Hours
Elements of Competency	<p>Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables</p>
1. Obtain and convey workplace information	<p>1.1 Specific and relevant information is accessed from <u>appropriate sources</u></p> <p>1.2 Effective questioning, active listening and speaking skills are used to gather and convey information</p> <p>1.3 Appropriate <u>medium</u> is used to transfer information and ideas</p> <p>1.4 Appropriate non- verbal communication is used</p> <p>1.5 Appropriate lines of communication with supervisors and colleagues are identified and followed</p> <p>1.6 Defined workplace procedures for the location and <u>storage</u> of information is used</p> <p>1.7 Personal interaction is carried out clearly and concisely</p>
2. Speak English at a basic operational level	<p>2.1 Simple conversations on familiar topics with work colleagues are participated</p> <p>2.2 Simple verbal instructions or requests are responded to simple requests are made</p> <p>2.3 Routine procedures are described</p> <p>2.4 Likes, dislikes and preferences are expressed</p> <p>2.5 Different <u>forms</u> of expression in English are identified</p>
3. Participate in workplace meetings and discussions	<p>3.1 Team meetings are attended on time</p> <p>3.2 Own opinions are clearly expressed and those of others are listened to without interruption</p> <p>3.3 Meeting inputs are consistent with the meeting purpose and established <u>protocols</u></p> <p>3.4 <u>Workplace interactions</u> are conducted in a courteous manner</p> <p>3.5 Questions about simple routine workplace procedures and matters concerning working conditions of employment are asked and responded to</p> <p>3.6 Meeting's outcomes are interpreted and implemented</p>

4. Complete relevant work-related documents	4.1 Range of forms related to conditions of employment are completed accurately and legibly 4.2 Workplace data is recorded on standard workplace forms and documents 4.3 Basic mathematical processes are used for routine Calculations 4.4 Errors in recording information on forms/ documents are identified and corrected as required 4.5 Reporting requirements to supervisor are completed according to work place guidelines
Range of Variables	
Variables	Range (may include but not limited to):
1. Appropriate sources	1.1 Suppliers 1.2 Trade personnel 1.3 Local government/Authority 1.4 Industry bodies
2. Medium	2.1 Memorandum 2.2 Circular 2.3 Notice 2.4 Information discussion 2.5 Follow-up or verbal instructions 2.6 Face to face communication
3. Storage	3.1 Manual filing system 3.2 Computer-based filing system
4. Forms	4.1 Personnel forms 4.2 Telephone message forms 4.3 Safety reports forms 4.4 Collateral forms
5. Protocols	5.1 Observing meeting 5.2 Compliance with meeting decisions
6. Workplace interactions	6.1 Face to face 6.2 Telephone 6.3 Social Network Service (SNS) 6.4 Electronic and two-way radio
Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency	

1. Critical aspects of competency	<p>Assessment required evidence that the candidate:</p> <ul style="list-style-type: none"> 1.1 prepared written communication following standard format of work place 1.2 accessed information using communication equipment 1.3 spoken English at a basic operational level 1.4 made use of relevant terms as an aid to transfer information effectively 1.5 conveyed information effectively adopting the formal or informal communication
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Effective communication 2.2 Different modes of communication 2.3 Written communication 2.4 Work place policies 2.5 Communication procedures and systems 2.6 Technology relevant to the work place 2.7 Individual's work responsibilities
3. Underpinning skills	<ul style="list-style-type: none"> 3.1 Speaking with simple spoken English 3.2 Performing routine workplace duties following simple written notices 3.3 Participating in workplace meetings and discussions 3.4 Completing work related documents 3.5 Estimating, calculating and recording routine workplace measures 3.6 Applying basic mathematical processes of addition, subtraction, division and multiplication 3.7 Building good relation to people of social range in the workplace 3.8 Gathering and providing information in response to workplace requirements
4. Required attitude	<ul style="list-style-type: none"> 4.1 Commitment to occupational health and safety 4.2 Sincere and honest to duties 4.3 Promptness in carrying out activities 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect of peers and seniors in workplace 4.8 Communicate with peers and seniors in workplace
5. Resource implications	<ul style="list-style-type: none"> 5.1. Computer/Laptop 5.2. Telephone 5.3. Relevant tools, Equipment, software and facilities needed to perform the activities. 5.4. Required learning materials

6. Methods of assessment	Competency should be assessed by: 6.1 Written test 6.2 Demonstration 6.3 Oral Questioning
7. Context of assessment	7.1 Competency assessment must be done in NSDA accredited assessment centre 7.2 Assessment should be done by a NSDA certified/nominated assessor

Accreditation Requirements

Training Providers must be accredited by National Skills Development Authority (NSDA), 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 qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.

Sector Specific Units of Competencies

Unit Code and Title	SU-RMGT-01-L2-V1: Explore the History of Textile Sector
Unit Descriptor	This unit covers the knowledge, skill and attitude required in explore the history of textile sector. It specifically includes examine the background of textile sector, identify main industries with in textile sector and prime local and export markets.
Nominal Hours	15 Hours
Elements of Competency	Performance Criteria <u>Bold & 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 with in textile sector	2.1 Main industries of the textile sector are identified 2.2 Importance of textile sector and main industries is explored and analyzed
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	
Variables	Range (may include but not limited to):
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, recent and meet all requirements of current version of the Unit of Competency	
1. Critical aspects of competency	Assessment required 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. Required attitude	4.1 Commitment to occupational health and safety 4.2 Sincere and honest to duties 4.3 Promptness in carrying out activities 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect of peers and seniors in workplace 4.8 Communicate with peers and seniors in workplace
5. Resource implications	5.1. Manuals 5.2. Drawings 5.3. Specifications
6. Methods of assessment	Competency should be assessed by: 6.1 Written test 6.2 Demonstration 6.3 Oral Questioning
7. Context of assessment	7.1 Competency assessment must be done in NSDA accredited assessment centre 7.2 Assessment should be done by a NSDA certified/nominated assessor

Accreditation Requirements

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Unit Code and Title	SU-RMGT-02-L2-V1: Perform Measurement and Calculations
Unit Descriptor	<p>This unit covers the knowledge, skills and attitudes required for performing measurement and calculations in textile sector.</p> <p>It specially includes Identify & check measuring instruments, carry out measurements, interpret simple calculations, and maintain measuring instruments.</p>
Nominal Hours	15 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables
1. Identify and check measuring instruments	<p>1.1. Work instructions are confirmed and applied</p> <p>1.2. Materials to be measured are identified and classified</p> <p>1.3. Appropriate <u>measuring devices</u> are selected based on materials to be measured</p> <p>1.4. Specifications are obtained from relevant <u>documents</u></p> <p>1.5. Tolerance and clearance limits are identified and adjusted according to job requirements</p>
2. Carry out measurements	<p>2.1 Accurate <u>measurements</u> are obtained in accordance with job requirements</p> <p>2.2 Systems of measurements are identified and measurement conversions done as per requirement</p> <p>2.3 Measurements are confirmed and recorded in the given company format</p>
3. Interpret simple calculations	<p>3.1 Simple calculations involving <u>basic operations</u> are carried out</p> <p>3.2 <u>Other operations</u> are used to complete tasks</p> <p>3.3 Appropriate formulas for calculating quantities of materials are selected</p> <p>3.4 <u>calculations</u> are performed and verified</p> <p>3.5 Material quantities are calculated and shared with team as per requirement</p>
4. Maintain measuring instruments	<p>4.1 Cleaning equipment and materials are collected</p> <p>4.2 Measuring devices are cleaned, maintained and stored</p>
Range of Variables	
Variables	Range (may include but not limited to):
1. Measuring device	<p>1.1. Measuring Tape</p> <p>1.2. Steel rule</p> <p>1.3. Calculator</p>

	1.4. Sets square
2. Documents	2.1 Technical Manuals 2.2 Specifications 2.3 Sketches 2.4 Charts 2.5 Photographs
3. Measurements	3.1 Length 3.2 Width 3.3 Weight 3.4 Tolerance
4. Basic operation	4.1 Addition 4.2 Subtraction 4.3 Multiplication 4.4 Division
5. Other operations	5.1 Fractions 5.2 Percentages 5.3 Mixed numbers 5.4 Conversions 5.5 Scales
6. Calculations	6.1 Area 6.2 Volume 6.3 Circumference 6.4 CBM 6.5 Volumetric Weight
Evidence Guide	
The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency	
1. Critical aspects of competency	Assessment required evidence that the candidate: 1.1 selected measuring devices based on materials to be measured 1.2 identified systems of measurements 1.3 obtained measurements as per job requirements 1.4 carried out calculations for quantities of materials 1.5 confirmed and recorded measurements as per standard 1.6 maintained measuring devices
2. Underpinning knowledge	2.1 Information on measuring devices 2.2 Units of Measurement 2.3 Units of Conversion 2.4 Selection technique of appropriate measuring devices 2.5 Measurement and calculation technique for apparel merchandising 2.6 Techniques of recording measurements 2.7 Way to allowance and Tolerance

	<p>2.8 Presentation of data and information</p> <p>2.9 Instructions to use of measuring devices</p>
3. Underpinning skills	<p>3.1 Identifying measuring devices based on materials to be measured</p> <p>3.2 Obtaining specification of measuring devices from relevant document</p> <p>3.3 Taking measurement according to the job requirements</p> <p>3.4 Identifying tolerance and clearance limits and adjusting according to the job requirements</p> <p>3.5 Interpret calculations for quantities of materials</p> <p>3.6 Conforming and recording measurements as per standard</p> <p>3.7 Maintaining measuring devices</p>
4. Required attitude	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Sincere and honest to duties</p> <p>4.3 Promptness in carrying out activities</p> <p>4.4 Environmental concerns</p> <p>4.5 Eagerness to learn</p> <p>4.6 Tidiness and timeliness</p> <p>4.7 Respect of peers and seniors in workplace</p> <p>4.8 Communicate with peers and seniors in workplace</p>
5. Resource implications	<p>5.1 Work instructions</p> <p>5.2 Relevant Documents</p> <p>5.3 Measuring instruments & other tools, equipment and physical facilities appropriate to perform activities.</p> <p>5.4 Materials to be measured</p>
6. Methods of assessment	<p>Competency should be assessed by:</p> <p>6.1 Written test</p> <p>6.2 Demonstration</p> <p>6.3 Oral Questioning</p>
7. Context of assessment	<p>7.1 Competency assessment must be done in NSDA accredited assessment centre</p> <p>7.2 Assessment should be done by a NSDA certified/nominated assessor</p>
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by National Skills Development Authority (NSDA), 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 qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.</p>	

Unit Code and Title	SU-RMGT-03-L2-V1: Apply Quality Procedures
Unit Descriptor	This unit covers the knowledge, skills and attitude required for applying quality procedures. It specially includes Identify & follow quality procedures & maintain standard procedures.
Nominal Hours	20 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables
1. Identify quality procedures	1.1. <u>Manuals</u> are collected as per sample 1.2. Importance of manuals is recognized 1.3. Instructions and procedures are identified 1.4. Required information are collected from manuals 1.5. Performance measurement systems are identified
2. Follow quality procedures	2.1 Instructions and procedures are followed strictly and duties are performed in accordance with demand of <u>quality improvement system</u> 2.2 Concept of supplying product or service to meet the <u>customer quality requirements</u> is understood and accordingly applied 2.3 Conformance to specifications is ensured 2.4 Defects are detected and reported to authority according to standard operating procedures
3. Maintain standard procedures	3.1 Performance is assessed at regular interval 3.2 Specifications and standard operating procedures are established 3.3 Quality of product is checked and verified 3.4 Quality control and quality assurance system procedures for each job are followed 3.5 Conformance to specification is ensured in every case at all situations
Range of Variables	
Variables	Range (may include but not limited to):
1. Manuals	1.1 Buyers specification manual 1.2 Compliance manual 1.3 Maintenance procedure manual 1.4 Periodic maintenance manual 1.5 Quality manual 1.6 Signs and symbols, instruction manuals

2. quality improvement system	<ul style="list-style-type: none"> 2.1 Quality inspection 2.2 Testing 2.3 Quality control 2.4 Quality assurance 2.5 Total Quality Management
3. Customer quality requirements	<ul style="list-style-type: none"> 3.1 Performance 3.2 Features 3.3 Reliability 3.4 Conformance 3.5 Aesthetics 3.6 Durability
<p>Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency</p>	
1. Critical aspects of competency	<p>Assessment required evidence that the candidate:</p> <ul style="list-style-type: none"> 1.1 followed instructions and procedures strictly 1.2 performed duties in accordance with demand of quality system 1.3 ensured conformance to specifications 1.4 detected defects and reported to authority in accordance to standard operating procedures 1.5 understood concept of supplying product or service to meet the customer quality requirements 1.6 held responsible for quality work 1.7 followed quality control and quality assurance system procedures for each job
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Importance of maintaining quality 2.2 quality, quality assurance, quality control, quality inspection, quality improvement and total quality control 2.3 Process and procedures for improving and maintaining quality 2.4 Procedures for addressing defects. 2.5 Record keeping within the quality improvement system in workplace 2.6 Factors, which affect successful implementation of the quality systems and procedures
3. Underpinning skills	<ul style="list-style-type: none"> 3.1 Maintaining good quality 3.2 Eliminating poor quality 3.3 Understanding the meaning of the key terms - quality, quality assurance, quality control, quality inspection, quality improvement and total quality control. 3.4 Improving and maintaining quality 3.5 Addressing defects and procedures

	<p>3.6 Recording within the quality improvement system in workplace.</p> <p>3.7 Implementing quality systems and procedures</p>
4. Required attitude	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Sincere and honest to duties</p> <p>4.3 Promptness in carrying out activities</p> <p>4.4 Environmental concerns</p> <p>4.5 Eagerness to learn</p> <p>4.6 Tidiness and timeliness</p> <p>4.7 Respect of peers and seniors in workplace</p> <p>4.8 Communicate with peers and seniors in workplace</p>
5. Resource implications	<p>5.1 Tools, equipment and physical facilities appropriate to perform activities.</p> <p>5.2 Materials, consumables to perform activities</p>
6. Methods of assessment	<p>Competency should be assessed by:</p> <p>6.1 Written test</p> <p>6.2 Demonstration</p> <p>6.3 Oral Questioning</p>
7. Context of assessment	<p>7.1 Competency assessment must be done in NSDA accredited assessment centre</p> <p>7.2 Assessment should be done by a NSDA certified/nominated assessor</p>
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by National Skills Development Authority (NSDA), 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 qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.</p>	

Occupation Specific Units of Competencies

Unit Code and Title	OU- RMGT-QCDPW-01-L3-V1: Interpret Quality Control Process for Dyeing and Printing
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to interpret quality control process for dyeing and printing. It specifically includes classify woven fabrics, define dyeing and printing terminologies, describe process of dyeing and describe process of printing.
Nominal Hours	55 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables
1. Classify woven fabrics	1.1 <u>Types of woven fabrics</u> are recognized 1.2 Woven fabrics are classified according to job requirements 1.3 <u>Properties of woven fabrics</u> are described
2. Define dyeing and printing terminologies	2.1. <u>Types of dyeing</u> are identified 2.2. <u>Methods of printing</u> are identified 2.3. <u>Styles of printing</u> are identified 2.4. <u>Dyeing and printing terminologies</u> are defined
3. Describe process of dyeing	3.1 <u>Steps of dyeing process</u> are interpreted 3.2 Dyeing process flow chart is interpreted 3.3 <u>Dyeing machines</u> are identified as per job requirements 3.4 <u>Dyeing chemicals</u> are listed as per job requirements 3.5 Dyes and chemicals ratio are explained as per standard
4. Describe process of printing	4.1 <u>Steps of printing process</u> are interpreted 4.2 Flow chart of printing is interpreted 4.3 <u>Printing machines</u> are identified as per job requirements 4.4 <u>Printing chemicals</u> are listed as per job requirements 4.5 Dyes and chemicals ratio are explained as per standard
Range of Variables	
Variables	Range (may include but not limited to):
1. Types of woven fabrics	1.1 Plain fabric 1.1.1 Oxford fabric 1.1.2 Poplin fabric 1.1.3 Terry fabric 1.1.4 Yarn dyed (Y\D) fabric 1.1.5 Sheeting fabric 1.1.6 Canvas fabric 1.1.7 Taffeta fabric 1.1.8 Tetron cotton (TC) fabric 1.1.9 Chief valued cotton (CVC) fabric

	<ul style="list-style-type: none"> 1.1.10 Dobby fabric 1.1.11 Matt fabric 1.2 Twill <ul style="list-style-type: none"> 1.2.1 Denim fabric 1.2.2 Twill fabric 1.2.3 Satin
2. Properties of woven fabrics	<ul style="list-style-type: none"> 2.1 Thickness 2.2 Strength 2.3 Dimensional stability 2.4 Fiber composition 2.5 Elasticity 2.6 Moisture regains
3. Types of dyeing	<ul style="list-style-type: none"> 3.1 Bale dyeing 3.2 Continuous dyeing 3.3 Semi continuous dyeing 3.4 Beam dyeing 3.5 Cross dyeing 3.6 Jigger dyeing 3.7 Yarn dyeing
4. Methods of printing	<ul style="list-style-type: none"> 4.1 Block 4.2 Roller 4.3 Digital 4.4 Screen 4.5 Transfer 4.6 Inject
5. Styles of printing	<ul style="list-style-type: none"> 5.1 Direct 5.2 Discharge 5.3 Resist
6. Dyeing and printing terminologies	<ul style="list-style-type: none"> 6.1 Dyes <ul style="list-style-type: none"> 6.1.1 Reactive dye 6.1.2 Vat dye 6.1.3 Disperse dye 6.2 Recipe calculation 6.3 Pigment 6.4 Material liquor ratio 6.5 Water hardness 6.6 Optical brightening agents (OBA) 6.7 Shade 6.8 Color fastness 6.9 PH 6.10 Screen preparation 6.11 Physical test <ul style="list-style-type: none"> 6.11.1 GSM

	6.11.2 Yarn count 6.11.3 Fabric width & length 6.11.4 Tear strength 6.11.5 Shrinkage 6.11.6 Tensile strength 6.11.7 Pilling 6.11.8 Abrasion 6.12 Chemical test 6.12.1 PH 6.12.2 Color fastness
7. Steps of dyeing process	7.1 Inspection of grey fabric 7.2 Stitching 7.3 Cropping 7.4 Brushing 7.5 Singeing 7.6 De-sizing 7.7 Scouring 7.8 Bleaching 7.9 Souring 7.10 Washing 7.11 Drying 7.12 Mercerizing 7.13 Dyeing 7.14 After treatment 7.15 Finishing 7.16 Inspection 7.17 Packing
8. Dyeing machines	8.1 Cold Pad Batch (CPB) dyeing machine 8.2 Thermosol dyeing machine 8.3 Jigger dyeing machine 8.4 Jet dyeing machine
9. Dyeing chemicals	9.1 Enzyme 9.2 Wetting agent 9.3 Sequestering agent 9.4 Detergent 9.5 Caustic soda 9.6 Hydrogen per oxide (H ₂ O ₂) 9.7 Hydrogen per oxide Stabilizer 9.8 Mercerizing oil 9.9 Sodium hydrosulphide (hydrose) 9.10 Dyes 9.11 Levelling agent 9.12 Glauber salt

	<ul style="list-style-type: none"> 9.13 Soda ash 9.14 Fixing agent 9.15 Acetic acid 9.16 Softener 9.17 Anti-foaming agents
10. Steps of printing process	<ul style="list-style-type: none"> 10.1 Fabric inspection 10.2 Fabric preparation 10.3 Printing 10.4 Color fixing 10.5 Curing/steaming 10.6 Finishing 10.7 Inspection 10.8 Packing
11. Printing machines	<ul style="list-style-type: none"> 11.1 Flat bed 11.2 Rotary
12. Printing chemicals	<ul style="list-style-type: none"> 12.1 Binder 12.2 Thickener 12.3 Urea 12.4 Liquor ammonia 12.5 Caustic soda 12.6 Resist salt 12.7 Glycerin 12.8 Dyes 12.9 Fixer 12.10 Softener
<p>Evidence Guide</p> <p>The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency</p>	
1. Critical aspects of competency	<p>Assessment required evidence that the candidate:</p> <ul style="list-style-type: none"> 1.1 classified woven fabrics 1.2 defined dyeing and printing terminologies 1.3 described process of dyeing 1.4 described process of printing
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Types of woven fabrics 2.2 Properties of woven fabrics 2.3 Types of dyeing 2.4 Method of printing 2.5 Style of printing 2.6 Dyeing and printing terminology 2.7 Steps of dyeing process 2.8 Dyeing machine 2.9 and printing machine

	<ul style="list-style-type: none"> 2.10 Steps of printing process 2.11 Recipe calculation 2.12 Dyeing chemicals 2.13 Safe handling procedures of dyeing chemicals 2.14 Printing chemicals 2.15 Safe handling procedures of printing chemicals
3. Underpinning skills	<ul style="list-style-type: none"> 3.1 Recognizing types of woven fabrics 3.2 Identifying dyeing and printing terminology 3.3 Identifying dyeing and printing machines 3.4 Interpreting process of dyeing and printing 3.5 Listing dyeing & printing chemicals 3.6 Preparing flow chart of printing
4. Required attitude	<ul style="list-style-type: none"> 4.1 Commitment to occupational health and safety 4.2 Sincere and honest to duties 4.3 Promptness in carrying out activities 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect of peers and seniors in workplace 4.8 Communicate with peers and seniors in workplace
5. Resource implications	<ul style="list-style-type: none"> 5.1. Workplace (simulated or actual) 5.2. Relevant materials 5.3. Work instruction 5.4. Pens 5.5. Paper
6. Methods of assessment	<p>Competency should be assessed by:</p> <ul style="list-style-type: none"> 6.1 Written test 6.2 Demonstration 6.3 Oral Questioning
7. Context of assessment	<ul style="list-style-type: none"> 7.1 Competency assessment must be done in NSDA accredited assessment centre 7.2 Assessment should be done by a NSDA certified/nominated assessor
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by National Skills Development Authority (NSDA), 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 qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.</p>	

Unit Code and Title	OU- RMGT-QCDPW-02-L3-V1: Perform Grey Fabric Inspection
Unit Descriptor	This unit covers the knowledge, skills, and attitudes required to performing grey fabric inspection. It specifically includes identify grey fabric defects, inspect grey fabric and report on grey fabric inspection.
Nominal Hours	50 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables
1. Identify grey fabric defects	1.1 <u>Grey fabric defects</u> are identified 1.2 Fabric defects are listed 1.3 Causes & remedies of fabric defects are listed
2. Inspect grey fabric	2.1 4-point system is described 2.2 Grey fabric samples are collected as per standard procedure 2.3 Grey fabric is inspected using 4-point system
3. Report on grey fabric Inspection	3.1 Grey fabric Inspection report is prepared as per 4-point system 3.2 <u>Fabrics grading</u> is performed as per inspection report 3.3 Inspection report is recorded and submitted as per workplace standard
Range of Variables	
Variables	Range (may include but not limited to):
1. Grey fabric defects	1.1 Double pick 1.2 Reed marks 1.3 Thick Place 1.4 Thin place 1.5 Neps 1.6 Oil marks 1.7 Knot 1.8 Foreign fiber 1.9 Broken warp/weft 1.10 Miss pick 1.11 Listing check 1.12 Hole marks 1.13 Pin hole 1.14 Barre marks 1.15 Seat up
2. Fabrics Grading	2.1 Accepted 2.2 C grade (Mended/Negotiated) 2.3 D Grade (Rejected)
Evidence Guide	

The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency	
1. Critical aspects of competency	<p>Assessment required evidence that the candidate:</p> <ul style="list-style-type: none"> 1.1 identified grey fabric defects 1.2 inspected grey fabric 1.3 reported on grey fabric Inspection
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Grey fabrics defects 2.2 Causes & remedies of fabric defects 2.3 4-point system 2.4 Collection procedure of grey fabric sample 2.5 Grey fabric inspection report preparation procedure 2.6 Fabric grading procedure
3. Underpinning skills	<ul style="list-style-type: none"> 3.1 Identifying grey fabric defects 3.2 Listing fabric defects 3.3 Identifying 4-point system 3.4 Identifying grey fabric inspection faults 3.5 Inspecting grey fabric 3.6 Performing fabrics grading 3.7 Recording and submitting inspection report
4. Required attitude	<ul style="list-style-type: none"> 4.1 Commitment to occupational health and safety 4.2 Sincere and honest to duties 4.3 Promptness in carrying out activities 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect of peers and seniors in workplace 4.8 Communicate with peers and seniors in workplace
5. Resource implications	<ul style="list-style-type: none"> 5.1. Calculator 5.2. Woven fabrics 5.3. Pen
6. Methods of assessment	<p>Competency should be assessed by:</p> <ul style="list-style-type: none"> 6.1 Written test 6.2 Demonstration 6.3 Oral Questioning
7. Context of assessment	<ul style="list-style-type: none"> 7.1 Competency assessment must be done in NSDA accredited assessment centre 7.2 Assessment should be done by a NSDA certified/nominated assessor
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by National Skills Development Authority (NSDA), 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 qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.</p>	

Unit Code and Title	OU- RMGT-QCDPW-03-L3-V1: Perform Quality Control of Dyeing
Unit Descriptor	<p>This unit covers the knowledge, skills, and attitudes required to perform quality control of dyeing.</p> <p>It specifically identifies dyeing defects, perform tests in pre-treatment process, online quality control in dyeing, test on dyed fabric and final inspection on dyed fabric.</p>
Nominal Hours	80 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables
1. Identify dyeing defects	<p>1.1 <u>Dyeing defects</u> are identified</p> <p>1.2 Dyeing defects are defined</p> <p>1.3 Causes and remedial measures of dyeing defects are listed</p>
2. Perform tests in pre-treatment process	<p>2.1 <u>Types of tests for pre-treatment process</u> are interpreted</p> <p>2.2 Tests for pre-treatment process are performed as per specification</p> <p>2.3 Test reports for pre-treatment process are prepared and submitted as per workplace standard</p>
3. Perform online quality control in dyeing	<p>3.1 Sample is collected as per standard</p> <p>3.2 Color shade is checked with standard</p> <p>3.3 P^H is checked as per standard</p> <p>3.4 <u>Color Fastness</u> is checked as per standard</p> <p>3.4 Online test reports are prepared and submitted as per standard</p>
4. Perform tests on dyed fabric	<p>4.1 Sample is collected from dyed fabric as per standard</p> <p>4.2 <u>Physical tests</u> are performed as per buyer manual</p> <p>4.3 Test reports are prepared and submitted as per standard</p>
5. Perform final inspection on dyed fabric	<p>5.1. Fabric is inspected as per 4-point system</p> <p>5.2. Final inspection report is prepared and submitted as per standard</p> <p>5.3. Fabrics grading is performed as per final inspection report</p> <p>5.4. Shade band is prepared and checked as per standard</p> <p>3.5 GSM band is prepared and checked as per standard</p>
Range of Variables	
Variables	Range (may include but not limited to):

1. Dyeing defects	<ul style="list-style-type: none"> 1.1 Running shade 1.2 Shade variation 1.3 Batch to batch shade variation 1.4 Uneven dye 1.5 Center to Side Variation (CSV) 1.6 Side to Side Variation (SSV) 1.7 Line mark 1.8 Color Spot 1.9 Softener Spot 1.10 Patta
2. Types of testing for pre-treatment process	<ul style="list-style-type: none"> 2.1 P^H test 2.2 Absorbency test 2.3 Sizing test 2.4 Whiteness and Brightness tests
3. Color fastness	<ul style="list-style-type: none"> 3.1 Color fastness to rubbing 3.2 Color fastness to light 3.3 Color fastness to wash 3.4 Color fastness to perspiration
4. Physical tests	<ul style="list-style-type: none"> 4.1 Composition 4.2 Gram per Square Meter (GSM) 4.3 Shrinkage 4.4 Skewness 4.5 Tearing strength 4.6 Tensile strength 4.7 Pilling and abrasion resistance 4.8 Stiffness
Evidence Guide	
The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency	
1. Critical aspects of competency	<p>Assessment required evidence that the candidate:</p> <ul style="list-style-type: none"> 1.1 identified dyeing defects 1.2 performed tests in pre-treatment process 1.3 performed online quality control in dyeing 1.4 performed tests on dyed fabric 1.5 performed final inspection on dyed fabric
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Dyeing defects 2.2 Causes and remedial measures of dyeing defects 2.3 Types of testing for pre-treatment activities 2.4 Color shading procedure 2.5 Color fastness 2.6 Sample collection procedure 2.7 Physical tests 2.8 GSM band 2.9 Shade band

	2.10 Fabrics grading
3. Underpinning skills	3.1 Performing testing pre-treatment activities 3.2 Checking color shade 3.3 Checking PH 3.4 Checking color fastness 3.5 Preparing online test reports 3.6 Performing physical test 3.7 Preparing dyed fabric test reports 3.8 Preparing GSM band 3.9 Preparing shade band 3.10 Inspecting fabric as per 4-point system 3.11 Performing fabrics grading 3.12 Preparing final inspection reports
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Sincere and honest to duties 4.3 Promptness in carrying out activities 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect of peers and seniors in workplace 4.8 Communicate with peers and seniors in workplace
5. Resource implications	5.1. Physical tests tools 5.2. Fabric inspection tools 5.3. Paper 5.4. Pen
6. Methods of assessment	Competency should be assessed by: 6.1 Written test 6.2 Demonstration 6.3 Oral Questioning
7. Context of assessment	7.1 Competency assessment must be done in NSDA accredited assessment centre 7.2 Assessment should be done by a NSDA certified/nominated assessor
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by National Skills Development Authority (NSDA), 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 qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.</p>	

Unit Code and Title	OU- RMGT-QCDPW-04-L3-V1: Perform Quality Control of Printing
Unit Descriptor	This unit covers the knowledge, skills, and attitudes required to perform quality control of printing. It specifically includes identify printing defects, perform online quality control in printing, perform tests on printed fabric and perform final inspection on printed fabric.
Nominal Hours	80 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables
1. Identify printing defects	1.1 <u>Printing defects</u> identified 1.2 Printing defects are defined 1.3 Causes and remedial measures of defects are listed
2. Perform online quality control in printing	2.1 Sample is collected as per standard 2.2 Color shade and <u>print strike-off</u> is checked 2.3 Rubbing fastness is checked as per standard 2.4 Print quality is maintained as per art work
3. Perform tests on printed fabric	3.1 Sample is collected from printed fabric as per standard 3.2 <u>Physical and chemical tests</u> are performed as per buyer manual 3.3 Test reports are prepared and submitted as per standard
4. Perform final inspection of printed fabric	4.1 Printed fabric is inspected as per standard 4.2 Final inspection report is prepared as per standard 4.3 Final inspection report is submitted
Range of Variables	
Variables	Range (may include but not limited to):
1. Printing defects	1.1 Color overlap 1.2 Color bleeding 1.3 Print registration 1.4 Color mismatch 1.5 Wrong color position 1.6 Center to side variation (CSV) 1.7 Side to side variation (SSV) 1.8 Repeat mark 1.9 Crease marks 1.10 Color spot 1.16 Repeat variation
2. Print strike-off	2.1 Design 2.2 Motif 2.5 Repeat size

3. Physical and chemical test	3.1 Physical Test 3.1.1 Absorbency 3.1.2 Fabric width 3.1.3 GSM 3.1.4 Shrinkage 3.1.5 Appearance after wash 3.1.6 Composition 3.1.7 Pilling 3.1.8 Abrasion resistance 3.1.9 Tensile strength 3.1.10 Tearing strength 3.1.11 Stretchability 3.2 Chemical Test 3.2.1 pH 3.2.2 Color fastness to rubbing 3.2.3 Color fastness to washing 3.2.4 Color fastness to light 3.2.5 Color fastness to perspiration 3.2.6 Color fastness to saliva
Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency	
1. Critical aspects of competency	Assessment required evidence that the candidate: 1.1 identified printing defects 1.2 performed online quality control in printing 1.3 performed tests on printed fabric 1.4 performed final inspection on printed fabric
2. Underpinning knowledge	2.1 Printing defects 2.2 Causes and remedies measures of printing defects 2.3 Sample collection procedure 2.4 Color shade and print layout 2.5 Rubbing fastness 2.6 Art work 2.7 Online quality control in printing 2.8 Physical tests 2.9 Chemical tests 2.10 Test report format
3. Underpinning skills	3.1 Listing printing defects 3.2 Interpreting causes and remedies of printing faults 3.3 Collecting production sample 3.4 Checking color shade and print layout 3.5 Checking rubbing fastness 3.6 Maintaining quality 3.7 Performing physical test

	<ul style="list-style-type: none"> 3.8 Performing chemical test 3.9 Inspecting printed fabric 3.10 Preparing final inspection report 3.11 Submitting final inspection report
4. Required attitude	<ul style="list-style-type: none"> 4.1 Commitment to occupational health and safety 4.2 Sincere and honest to duties 4.3 Promptness in carrying out activities 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect of peers and seniors in workplace 4.8 Communicate with peers and seniors in workplace
5. Resource implications	<ul style="list-style-type: none"> 5.1. Calculator 5.2. Paper 5.3. Pen
6. Methods of assessment	<p>Competency should be assessed by:</p> <ul style="list-style-type: none"> 6.1 Written test 6.2 Demonstration 6.3 Oral Questioning
7. Context of assessment	<ul style="list-style-type: none"> 7.1 Competency assessment must be done in NSDA accredited assessment centre 7.2 Assessment should be done by a NSDA certified/nominated assessor
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by National Skills Development Authority (NSDA), 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 qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.</p>	

Development of Competency Standard

The Competency Standards for National Skills Certificate in Quality Control of Dyeing and Printing for Woven, Level-03 is developed by RTISC and SEIP.

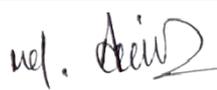
List of Members

SI No	Name and Address	Position in the committee
1.	Mr. Mohammad Nasir, Chairperson, RTISC	Chairperson
2.	Mr. Helal Uddin Ahmed, Vice Chairperson, RTISC	Member
3.	Mr. Dr. Md Sanwar Jahan, DEPD, Private-01, SEIP	Member
4.	Mr. Mohiuzzaman, Course Specialist, SEIP	Member
5.	Mr. Md. Sultan Al Maruf, QAO, SEIP	Member
6.	Mr. Burhan Uddin Banna, Lecturer, NITER	Member
7.	Mr. Md. Abu Noman, Senior Executive, SIM Fabrics Mills Ltd.	Member
8.	Mr. Md, Shahjalal Hossain, Manager, Abed Textiles Processing Mills Ltd.	Member
9.	Mr. Md. Sarafat Hossain, Assistant Manager, Noman Terry Towel Mills Ltd.	Member
10.	Mr. Md. Ariful Islam, Assistant Manager, Hossain Dyeing & Printing	Member
11.	Mr. Md. Habibullah Bilali, Coordinator-Monitoring & Evaluation, BTMA-SEIP	Member
12.	Mr. Syed Azharul Haque, CEO, Skills Zone	Member
13.	Md. Amir Hossain, Consultant, DPDS Consulting Support,	Member
14.	Wg, Cdr Zaglul Hayder (Rtd), CEO, RTISC.	Member
15.	Mr. Md. Sharif Nowaz, Executive (Curriculum Development & training) RTISC.	Member
16.	Mr. Md. Moniruzzaman, Executive (Assessment & Certification), RTISC.	Member

Validation of Competency Standard

The Competency Standards for National Skills Certificate in Quality Control of Dyeing and Printing for Woven, Level-03 is validated by NSDA on 15th June 2022.

List of Members

Sl No	Name and Address	Position in the committee	Signature
1.	Mr. Mohammad Nasir, Chairperson, RTISC	Chairperson	
2.	Mr. Abdulla Al Mabud, Specialist (LMD), Bangladesh Technical Education Board (BTEB), Cell: 01718406271, Email: mabud82@gmail.com	Member	
3.	Mr. Samir Chandra Das, DGM-QAD, Adury Knit Composite Limited, Cell: +88 01712214606, Email: 79samir606@gmail.com	Member	
4.	Mr. Md. Mamun Hasan, Managing Director Redical International, Cell: +88 01716238686, Email: maimun@radicalinternational.net	Member	
5.	Mr. Md. Hafiz Uddin, Manager (Printing), SIM Fabrics Limited. Cell: +88 01741176030, Email: printing@simgroup-bd.com	Member	
6.	Mr. Md. Fazleh Rabbi, Deputy Manager, Thermax Group, Cell: +88 01787691833, Email: fazleh.rabbi@thermaxgroup.com	Member	
7.	Mr. Naimul Hasan Raju, Manager, Pidilite Industries Ltd. Cell: +88 01722654811, Email: naimul.hasan@pidilite.com.bd	Member	
8.	Mr. Emran Hossain, Assistant Professor, BUTEX, Cell: +88 01675787969. Email: emran@butex.edu.bd	Member	
9.	Mr. Md. Sharif Nowaz, Executive (Curriculum Development & training) RTISC, Cell: +88 01733459745, Email: sharifnowaz@gmail.com	Member	
10.	Dr. Md. Shahadat Hossain, Specialist-02, NSDA, Cell: +88 01715360652, Email: hossainsm61@gmail.com	Member	
11.	Md. Amir Hossain, Process Expert, NSDA, Mobile: +88 01631670445, Email: razib.consultant@yahoo.com	Member	

Workshop Minutes

Government of the People's Republic of Bangladesh
Prime Minister's Office
National Skills Development Authority
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E-6 / B, Agargaon, Sher-E-Bangla Nagar Dhaka-1207, Bangladesh.
Email: ec@nsda.gov.bd
Website: www.nsd.gov.bd

Minutes of the Competency Standard Validation Workshop on “Quality Control for Dyeing and Printing (Woven)”

Chairman	: Mr. Mohammed Nasir, Chairman, RT, ISC
Date	: 15 June 2022
Time	: 9:00 am - 5:00 pm
Place	: ISC Conference Room, NSDA, Biniyog Bhaban, Agargaon, Dhaka-1207

The Chairman inaugurated the workshop by welcoming the expert participants attended in the workshop. He urges the participants to share their expert opinion to make the standard effective, job market responsive and updated one. During the day-long workshop, the competency standard of “Quality Control for Dyeing and Printing (Woven)” occupation was reviewed, modified and finalized in detail. The following changes and modification were made to validate and finalize the competency standard.

Serial No.	Content of validation	Whether it was appropriate		What actions have been taken if not appropriate?
		Yes	No	
1.	Name and level of occupation		No	The name of the occupation has been changed as "Quality Control of Dyeing and Printing for Woven" Instead of "Quality Control for Dyeing and Printing (Woven)"
2.	Nominal Hour	Yes		360 hours
3.	Unit of Competency		No	At Occupation Units following changes are made: <ul style="list-style-type: none">Proposed unit “Perform Grey Fabric Inspection” instead of “Identify Grey Fabric Defects”
4.	Element		No	Proper refinement of required elements has been achieved by keeping consistent elements.
5.	Performance Criteria		No	Necessary refinement of performance criteria has been achieved.
6.	Variables		No	Appropriate addition, modification and refinement of variables has been done keeping in view the performance criteria.
7.	Critical Aspect of Competence		No	Appropriate changes have been made in the critical aspect of competency as per the change of units.
8.	Underpinning knowledge		No	Necessary addition, changings and refinements have been made.

9.	Underpinning Skills		No	Necessary added, changes and refinements have been made.
10.	Attitude	Yes		
11.	Resources	Yes		
12.	Assessment methods	Yes		
13.	Others			<ul style="list-style-type: none"> ▪ The nominal hours of the units of competencies have been rescheduled for content consideration. ▪ Overall, the occupation has been included in Level-3 according to NSQF (BNQF 1-6).

Through the above activities, the Competency Standard has been finalized and validated as “**Quality Control of Dyeing and Printing for Woven, Level-3**”

Chairman
Committee on Standard and Curriculum Validation
Chairman – RMG & TEXTILE ISC