



# **COMPETENCY STANDARD FOR WOVEN SEWING MACHINE OPERATION**

**Level: 2**

**(RMG & Textile Sector)**

**Competency Standard Code: CS-RMGT-WSMO-L2-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 Woven Sewing Machine Operation 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

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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. "**Woven Sewing Machine Operation**" 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

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

The purpose of a competency standards is to:

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

Competency standards are developed by a working group comprised of 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-2 in Woven Sewing Machine Operation in RMG and 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





## Approval of Competency Standard

Approved By  
21<sup>st</sup> Authority Meeting of NSDA Held on 19.09.2022

  
Md. Saniul Ferdous  
Deputy Director (Admin)  
National Skills Development Authority  
Prime Minister's Office

Deputy Director (Admin)  
and  
Officer of Secretarial Duties for Authority Meeting  
National Skills Development Authority



## Table of Contents

Copyright .....	i
Introduction.....	ii
Overview.....	iii
Level Descriptors of NSQF (BNQF 1-6).....	iv
List of Abbreviations .....	v
Course Structure.....	1
Units & Elements at Glance.....	2
Generic Units of Competencies .....	5
Unit Code and Title.....	6
GU-02-L2-V1: Apply Occupational Safety and Health (OSH) Procedure in The Workplace	6
Unit Code and Title.....	10
GU-06-L3-V1: Receive and Respond to Workplace Instructions .....	10
Unit Code and Title.....	13
GU-06-L3-V1: Work in a Team Environment .....	13
Sector Specific Units of Competencies .....	15
SU-RMGT-01-L2-V1: Recognize the RMG Business Scenario .....	16
SU-RMGT-02-L3-V1: Perform Measurement and Calculations .....	19
SU-RMGT-03-L3-V1: Interpret Sketch and Specifications in Manuals .....	22
Occupation Specific Units of Competencies .....	24
OU-RMGT-WSMO-01-L2-V1: Interpret Woven Fabrics and Garments .....	25
OU-RMGT-WSMO-02-L2-V1: Prepare for Sewing Operation.....	27
OU-RMGT-WSMO-03-L2-V1: Operate Industrial Sewing Machine.....	31
OU-RMGT-WSMO-04-L2-V1: Make Pants .....	35
Development of Competency Standard .....	39
Validation of Competency Standard.....	41



**Competency Standards for National Skill Certificate, Level-2 in  
Woven Sewing Machine Operation in RMG & Textile Sector**

**Course Structure**

<b>SL No</b>	<b>Unit code and Title</b>	<b>UOC Level</b>	<b>Nominal (hours)</b>
<b>Generic Units of Competencies</b>			
1.	GU-02-L2-V1	Apply Occupational Safety and Health (OSH) Procedure in the Workplace	2 15
2.	GU-06-L3-V1	Receive and Respond to Workplace Instructions	3 15
3.	GU-04-L3-V1	Work in a Team Environment	3 20
<b>Sub Total</b>			<b>50</b>
<b>Sector Specific Units of Competencies</b>			
4.	SU-RMGT-01-L2-V1	Recognize the RMG Business Scenario	2 15
5.	SU-RMGT-02-L3-V1	Perform Measurement and Calculations	3 15
6.	SU-RMGT-03-L3-V1	Interpret Sketch and Specifications in Manuals	3 15
<b>Sub Total</b>			<b>45</b>
<b>Occupation Specific Units of Competencies</b>			
7.	OU-RMGT-WSMO-01-L2-V1	Interpret Woven Fabrics and Garments	2 15
8.	OU-RMGT-WSMO-02-L2-V1	Prepare for Sewing Operation	2 35
9.	OU-RMGT-WSMO-03-L2-V1	Operate Industrial Sewing Machine	2 100
10.	OU-RMGT-WSMO-04-L2-V1	Make Pants	2 115
<b>Sub Total</b>			<b>265</b>
<b>Total Duration</b>			<b>360</b>

## Units & Elements at Glance

### Generic Competencies

Code	Unit of competency	Elements of competency	Duration (hours)
GU-02-L2-V1	Apply Occupational Safety and Health (OSH) Procedure in the Workplace	<ol style="list-style-type: none"> <li>1. Identify OSH policies and procedures</li> <li>2. Follow OSH procedures</li> <li>3. Report hazards and risks</li> <li>4. Respond to emergencies</li> <li>5. Maintain personal well-being</li> </ol>	15
GU-06-L3-V1	Receive and Respond to Workplace Instructions	<ol style="list-style-type: none"> <li>1. Interpret and follow verbal instructions</li> <li>2. Read and interpret workplace documents</li> <li>3. Receive and follow written instructions</li> <li>4. Attend meetings and provide inputs</li> </ol>	15
GU-04-L3-V1	Work in a Team Environment	<ol style="list-style-type: none"> <li>1. Define team role and scope</li> <li>2. Identify individual role and responsibility</li> <li>3. Participate in team discussions</li> <li>4. Work as a team member</li> </ol>	20
<b>Total hours</b>			<b>50</b>

## Sector specific competencies

Code	Unit of competency	Elements of competency	Duration (hours)
SU-RMGT-01-L2-V1	Recognize the RMG Business Scenario	<ol style="list-style-type: none"> <li>1. Identify basic business communication practices in RMG sector</li> <li>2. Recognize history of RMG industries in Bangladesh</li> <li>3. Identify major departments of RMG industry</li> <li>4. List prime export markets</li> </ol>	15
SU-RMGT-02-L3-V1	Perform Measurement and Calculations	<ol style="list-style-type: none"> <li>1. Select measuring devices</li> <li>2. Obtain measurements for apparel</li> <li>3. Perform simple calculations</li> </ol>	15
SU-RMGT-03-L3-V1	Interpret Sketch and Specifications in Manuals	<ol style="list-style-type: none"> <li>1. Identify information from manual</li> <li>2. Interpret sketch and specifications</li> </ol>	15
<b>Total hours</b>			<b>45</b>

## Occupation specific competencies

Code	Unit of competency	Elements of competency	Duration (hours)
OU-RMGT-WSMO-01-L2-V1	Interpret Woven Fabrics and Garments	<ol style="list-style-type: none"> <li>1. Interpret woven fabrics</li> <li>2. Interpret woven garments</li> <li>3. Interpret handling procedure of woven fabric</li> </ol>	15
OU-RMGT-WSMO-02-L2-V1	Prepare for Sewing Operation	<ol style="list-style-type: none"> <li>1. Identify pattern and garments parts</li> <li>2. Identify machine, tools and materials</li> <li>3. Apply the attachments of sewing machine</li> <li>4. Set up machine for operation</li> </ol>	35
OU-RMGT-WSMO-03-L2-V1	Operate Industrial Sewing Machine	<ol style="list-style-type: none"> <li>1. Follow safety procedure at workplace</li> <li>2. Operate single needle machine</li> <li>3. Operate double needle machine</li> <li>4. Operate overlock machine</li> <li>5. Operate feed of the arm machine</li> <li>6. Operate flat lock machine</li> <li>7. Operate multi needle chain stitch machine</li> <li>8. Maintain and clean workplace</li> </ol>	100
OU-RMGT-WSMO-04-L2-V1	Make Pants	<ol style="list-style-type: none"> <li>1. Follow safety procedure at workplace</li> <li>2. Identify process of pants</li> <li>3. Perform stitch operation for pants</li> <li>4. Check stitch quality of pants</li> <li>5. Maintain and clean workplace</li> </ol>	115
<b>Total Hours</b>			<b>265</b>



# **Generic Units of Competencies**

<b>Unit Code and Title</b>	<b>GU-02-L2-V1: Apply Occupational Safety and Health (OSH) Procedure in The Workplace</b>
<b>Unit Descriptor</b>	This unit covers the knowledge, skills and attitudes required to apply occupational safety and health (OSH) procedure in the workplace. It specifically includes identifying OSH policies and procedures, following OSH procedures, reporting hazards and risks, responding to emergencies, and maintaining personal well-being.
<b>Nominal Hours</b>	<b>15 Hours</b>
<b>Elements of Competency</b>	<b>Performance Criteria</b> <b><u>Bold &amp; Underlined</u></b> terms are elaborated in the Range of Variables
1. Identify OSH policies and procedures	1.1. <b><u>OSH policies</u></b> and <b><u>safe operating procedures</u></b> are accessed and stated 1.2. <b><u>Safety signs and symbols</u></b> are identified and followed 1.3. Emergency response, evacuation procedures and other contingency measures are determined according to workplace requirements
2. Follow OSH procedures	2.1 <b><u>Personal protective equipment (PPE)</u></b> 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 <b><u>Hazards</u></b> 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 <b><u>emergency procedures</u></b> are followed 4.3 <b><u>Contingency measures</u></b> during workplace accidents, fire and other emergencies are recognized and followed in accordance with organization procedures 4.4 First aid procedures is 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

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

7. Contingency measures	7.1 Evacuation 7.2 Isolation 7.3 Decontamination
8. "Fit to Work" records	8.1 Medical Certificate every year 8.2 Accident reports, if any 8.3 Eye vision certificate
<b>Evidence Guide</b>	
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><b>Accreditation Requirements</b></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>	

<b>Unit Code and Title</b>	<b>GU-06-L3-V1: Receive and Respond to Workplace Instructions</b>
<b>Nominal Hours</b>	<b>15 Hours</b>
<b>Unit Descriptor</b>	<p>This unit covers the knowledge, skills and attitudes required to receive and respond to workplace instructions.</p> <p>It specifically includes interpreting and following verbal instructions, reading and interpreting workplace documents, receiving and following written instructions and attending meetings and providing inputs.</p>
<b>Elements of Competency</b>	<b>Performance Criteria</b> <b><u>Bold and Underlined</u></b> terms are elaborated in the Range of Variables Training Components.
1. Interpret and follow verbal Instructions	1.1 Verbal Instructions are interpreted 1.2 Questions are asked to clarify understanding or obtaining more information 1.3 Instructions are followed as per understanding 1.4 Information/ instruction is recorded
2. Read and interpret workplace documents	2.1 <b><u>Written instructions</u></b> are read and interpreted in accordance with <b><u>workplace guidelines</u></b> 2.2 Work <b><u>signage</u></b> are interpreted
3. Receive and follow written instructions	3.1 Written instructions are interpreted 3.2 Routine written instructions are followed in sequence 3.3 Feedback is given to workplace supervisor based on workplace guidelines
4 Attend meetings and provide inputs	4.1 Meetings are attended regularly and on time following well-disseminated agenda 4.2 Proper <b><u>Communication</u></b> methods are used to transmit instructions 4.3 Appropriate non-verbal communication is used 4.4 Inputs are provided consistent with the meeting purpose 4.5 Opinions are expressed without interruption 4.6 Meeting outputs are implemented
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (may include but not limited to):
1. Written instructions	1.1 Supervisor's / Manager's Instructions 1.2 Memoranda 1.3 Rules and Regulations 1.4 Signage 1.5 Approved Work Plan 1.6 External communications

2. Workplace guidelines	<ul style="list-style-type: none"> <li>2.1. Labor Policies and Guidelines</li> <li>2.2. Written Instructions</li> <li>2.3. Operations Manual</li> <li>2.4. Organizational Manuals</li> <li>2.5. Quality Assurance Handbook</li> </ul>
3. Signage	<ul style="list-style-type: none"> <li>3.1 On-site direction signs</li> <li>3.2 Common site warnings</li> <li>3.3 Location signs</li> <li>3.4 Traffic signs</li> </ul>
4. Communication	<ul style="list-style-type: none"> <li>4.1 Verbal instructions</li> <li>4.2 Written instructions</li> <li>4.3 Online communication</li> </ul>
<p><b>Evidence Guide</b>  The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.</p>	
1. Critical Aspects of Competency	<p>Assessment required evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 demonstrated knowledge of workplace procedures in receiving, interpreting read verbal &amp; written instruction and conduct communication</li> <li>1.2 satisfying the requirements mentioned in the performance criteria and range of variables</li> </ul>
2. Underpinning Knowledge	<ul style="list-style-type: none"> <li>2.1 Workplace Communication Policies, Standards and Procedures</li> <li>2.2 Verbal and Non-verbal communication</li> <li>2.3 Modes of Communication</li> </ul>
3. Underpinning Skills	<ul style="list-style-type: none"> <li>3.1 Receiving verbal instructions</li> <li>3.2 Interpreting verbal and written information/instruction</li> <li>3.3 Conveying instructions using verbal and</li> <li>3.4 Written forms of communication</li> <li>3.5 Participating in work place meetings and Discussions</li> </ul>
4. Underpinning Attitudes	<ul style="list-style-type: none"> <li>4.1 Commitment to occupational health and safety</li> <li>4.2 Environmental concerns</li> <li>4.3 Eagerness to learn</li> <li>4.4 Tidiness and timeliness</li> <li>4.5 Respect for rights of peers and seniors in workplace</li> <li>4.6 Communication with peers and seniors in workplace</li> </ul>
5. Resource Implications	<p>The following resources must be provided:</p> <ul style="list-style-type: none"> <li>5.1 Workplace (actual or simulated)</li> <li>5.2 Telephone</li> <li>5.3 Writing materials</li> </ul>
6 Methods of Assessment	<p>Competency should be assessed by:</p> <ul style="list-style-type: none"> <li>6.1 Written test</li> </ul>

	6.2 Demonstration 6.3 Oral Questioning
7 Context of Assessment	7.1 Competency assessment must be done in a NSDA accredited assessment centre 7.2 Assessment should be done by an NSDA certified/nominated assessor
<p><b>Accreditation Requirements</b></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>	



<b>Unit Code and Title</b>	<b>GU-06-L3-V1: Work in a Team Environment</b>
<b>Unit Descriptor</b>	This unit covers the knowledge, skills and attitudes required to working in a team environment.  It includes defining team role and scope, identifying individual role and responsibility, participating in team discussions and working as a team member.
<b>Nominal Hours</b>	<b>20 Hours</b>
<b>Elements of Competency</b>	<b>Performance Criteria</b> <b><u>Bold &amp; Underlined</u></b> 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 <b><u>team members</u></b> 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
<b>Range of Variables</b>	
<b>Variables</b>	<b>Range</b> (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
<b>Evidence Guide</b> 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 Performance Criteria and Range of Variables

2. Underpinning knowledge	<ul style="list-style-type: none"> <li>2.1 Team Structure, Role and Responsibility</li> <li>2.2 Individual Members' Roles and Responsibilities</li> <li>2.3 Communication Flow and Reporting Structures</li> <li>2.4 Team Planning</li> <li>2.5 Interpersonal Communication Skills</li> <li>2.6 Team Meeting Procedures</li> <li>2.7 OHS Practices</li> </ul>
3. Underpinning skills	<ul style="list-style-type: none"> <li>3.1 Identifying the role and responsibility of the team</li> <li>3.2 Identifying roles and responsibilities of individual members</li> <li>3.3 Participating in team discussions</li> <li>3.4 Working as a team member</li> </ul>
4. Underpinning Attitudes	<ul style="list-style-type: none"> <li>4.1 Commitment to occupational health and safety</li> <li>4.2 Environmental concerns</li> <li>4.3 Eagerness to learn</li> <li>4.4 Tidiness and timeliness</li> <li>4.5 Respect for rights of peers and seniors in workplace</li> <li>4.6 Communication with peers and seniors in Workplace</li> </ul>
5. Resource implications	<ul style="list-style-type: none"> <li>5.1 Pens</li> <li>5.2 Telephone</li> <li>5.3 Computer</li> <li>5.4 Writing materials</li> <li>5.5 Online communication</li> </ul>
6. Methods of assessment	<p>Competency should be assessed by:</p> <ul style="list-style-type: none"> <li>6.1. Written test</li> <li>6.2. Demonstration</li> <li>6.3. Oral Questioning</li> </ul>
7. Context of assessment	<ul style="list-style-type: none"> <li>7.1 Competency assessment must be done in NSDA accredited assessment center</li> <li>7.2 Assessment should be done by a NSDA certified/nominated assessor</li> </ul>

**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**

<b>Unit Code and Title</b>	<b>SU-RMGT-01-L2-V1: Recognize the RMG Business Scenario</b>
<b>Nominal Hours</b>	<b>15 Hours</b>
<b>Unit Descriptor</b>	This unit covers the knowledge; skills and attitude required for recognize the RMG business scenario. It specifically includes identifying basic business communication practices in RMG sector, recognizing history of RMG industries in Bangladesh, identifying major departments of RMG industry and listing prime export markets.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <b><u>Bold and Underlined</u></b> terms are elaborated in the Range of Variables.
1. Identify basic business communication practices in RMG sector	1.1 The communication requirements in the RMG sector are recognized in alignment to the role of sector 1.2 <b><u>Modes of Communication</u></b> are explained 1.3 Communication policies and guidelines are identified and interpreted
2. Recognize history of RMG industries in Bangladesh	2.1 <b><u>Background of RMG</u></b> Industries in Bangladesh is inferred with reference to the past history, present status and expected future trends 2.2 Importance of the RMG sector in relation to Bangladesh labour market is stated with emphasis on manpower and economic impact 2.3 Present and projected future trends and technologies relevant to the sector are summarized
3. Identify major departments of RMG industry	3.1 Scope and nature of <b><u>major departments</u></b> of the RMG sector are identified 3.2 Role and responsibilities of individuals are identified in relation to the department and organization as a whole 3.3 The <b><u>machines</u></b> used in different departments are identified
4. List prime export markets	4.1 The types of <b><u>prime export markets</u></b> are categorized on the basis of their current and future potential 4.2 Export marketing process is interpreted
<b>Range of Variables</b>	
<b>Variables</b>	<b>Range</b> (may include but not limited to):
1. Modes of communication	1.1 E-mail 1.2 Social Media 1.3 Telephonic Conversation 1.4 Fax 1.5 Meetings 1.6 Video Conference

	1.7 Courier
2. Background of RMG	2.1 History of Bangladesh RMG 2.2 Economy of Bangladesh 2.3 SWOT analysis on RMG sector 2.4 Gender dynamics of garments industry in Bangladesh. 2.5 Wages & efficiency in the garments industry 2.6 Compliance
3. Major Departments	3.1 PDS 3.2 Store 3.3 Cutting 3.4 Embellishment 3.5 Sewing 3.6 Washing 3.7 Finishing 3.8 Quality 3.9 Industrial Engineering 3.10 Production Planning and Control 3.11 Maintenance 3.12 Merchandising
4. Machines	4.1 Single needle machine 4.2 Double needle Machine 4.3 Over lock Machine 4.4 Flat lock Machine 4.5 Feed of the arm Machine 4.6 Kansai Multi Needle Machine 4.7 Bar tuck Machine 4.8 Button Hole Machine 4.9 Button Stitch Machine 4.10 Snap Attach Machine
5. Prime export markets	5.1 American market 5.2 European market 5.3 Asian market 5.4 Newly explored market
<b>Evidence Guide</b>	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	Assessment required evidence that the candidate: 1.1 identified mode Communication 1.2 interpreted production process 1.3 identified prime export markets
2. Underpinning knowledge	2.1 Policies and Guidelines 2.2 History of RMG sector

	<ul style="list-style-type: none"> <li>2.3 Trends in the RMG sector</li> <li>2.4 Production process</li> <li>2.5 Different Department in RMG sector</li> <li>2.6 Own roles and responsibilities</li> <li>2.7 Types of prime export markets</li> </ul>
3. Underpinning skills	<ul style="list-style-type: none"> <li>3.1. Identifying policies and guidelines in RMG sector</li> <li>3.2. Interpreting business communication technique</li> <li>3.3. Interpreting trends of RMG sector</li> <li>3.4. Identifying departments in RMG sector</li> <li>3.5. Identifying machines used in different departments</li> </ul>
4. Underpinning attitudes	<ul style="list-style-type: none"> <li>4.1 Commitment to occupational health and safety</li> <li>4.2 Promptness in carrying out activities</li> <li>4.3 Sincere and honest to duties</li> <li>4.4 Environmental concerns</li> <li>4.5 Eagerness to learn</li> <li>4.6 Tidiness and timeliness</li> <li>4.7 Respect for rights of peers and seniors in workplace</li> <li>4.8 Communication with peers and seniors in workplace</li> </ul>
5. Resource implications	<p>The following resources must be provided:</p> <ul style="list-style-type: none"> <li>5.1 Workplace (actual or simulated)</li> <li>5.2 Availability of quality tools and materials required</li> <li>5.3 Information on standard operating procedures (SOP),</li> <li>5.4 Fire extinguisher</li> <li>5.5 Uninterrupted power supply</li> </ul>
6. Methods of assessment	<p>Competency should be assessed by:</p> <ul style="list-style-type: none"> <li>6.1 Written test</li> <li>6.2 Demonstration</li> <li>6.3 Oral Questioning</li> </ul>
7. Context of assessment	<ul style="list-style-type: none"> <li>7.1 Competency assessment must be done in NSDA accredited assessment centre</li> <li>7.2 Assessment should be done by a NSDA certified/nominated assessor</li> </ul>
<p><b>Accreditation Requirements</b></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>	

<b>Unit Code and Title</b>	<b>SU-RMGT-02-L3-V1: Perform Measurement and Calculations</b>
<b>Nominal Hours</b>	<b>15 Hours</b>
<b>Unit Descriptor</b>	This unit covers the knowledge, skills and attitudes required for perform measurements and calculations.  It specially includes the selecting measuring devices, obtaining measurements for apparel and performing simple calculations.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <b><u>Bold and Underlined</u></b> terms are elaborated in the Range of Variables.
1. Select measuring devices	1.1 Work instructions are confirmed and applied to the job in hand 1.2 Materials to be measured are identified as per job specifications 1.3 Appropriate <b><u>measuring devices</u></b> are selected based on materials to be measured 1.4 Specifications are obtained from relevant <b><u>documents</u></b> 1.5 Tolerance and clearance limits are identified and adjusted according to the job requirements
2. Obtain measurements for apparel	2.1 Accurate <b><u>measurements</u></b> are obtained in accordance with job requirements 2.2 Systems of measurements are identified and measurement conversions done as per requirement 2.3 Measurements are confirmed and recorded in the given company format
3. Perform simple calculations	3.1 Simple calculations involving <b><u>basic operations</u></b> are carried out 3.2 <b><u>Other operations</u></b> are used to complete tasks 3.3 Appropriate formulas for calculating quantities of materials are selected 3.4 <b><u>Calculations</u></b> are performed and verified 3.5 Material quantities are calculated and shared with team as per requirement
<b>Range of Variables</b>	
<b>Variables</b>	<b>Range</b> (may include but not limited to):
1. Measuring device	1.1 Measuring Tape 1.2 Steel rule 1.3 Calculator 1.4 Sets square
2. Documents	2.1 Technical Manuals 2.2 Specifications

	<ul style="list-style-type: none"> <li>2.3 Sketches</li> <li>2.4 Charts</li> <li>2.5 Photographs</li> </ul>
3. Measurements	<ul style="list-style-type: none"> <li>3.1 Length</li> <li>3.2 Width</li> <li>3.3 Weight</li> <li>3.4 Tolerance</li> </ul>
4. Basic operations	<ul style="list-style-type: none"> <li>4.1 Addition</li> <li>4.2 Subtraction</li> <li>4.3 Multiplication</li> <li>4.4 Division</li> </ul>
5. Other operations	<ul style="list-style-type: none"> <li>5.1 Fractions</li> <li>5.2 Percentages</li> <li>5.3 Mixed numbers</li> <li>5.4 Conversions</li> <li>5.5 Scales</li> </ul>
6. Calculations	<ul style="list-style-type: none"> <li>6.1 Area</li> <li>6.2 Volume</li> <li>6.3 Circumference</li> <li>6.4 CBM</li> <li>6.5 Volumetric Weight</li> </ul>
<p><b>Evidence Guide</b></p> <p>The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.</p>	
1. Critical aspects of competency	<p>Assessment required evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 selected measuring devices based on materials to be measured</li> <li>1.2 obtained measurements as per job requirements</li> <li>1.3 performed calculations for quantities of materials</li> <li>1.4 confirmed and recorded measurements as per standard</li> </ul>
2. Underpinning knowledge	<ul style="list-style-type: none"> <li>2.1 Information on measuring devices</li> <li>2.2 Selection technique of appropriate measuring devices</li> <li>2.3 Measurement and calculation technique for apparel merchandising</li> <li>2.4 Techniques of recording measurements</li> <li>2.5 Way to allowance and Tolerance</li> <li>2.6 Presentation of data and information</li> <li>2.7 Instructions to use of measuring devices</li> </ul>
3. Underpinning skills	<ul style="list-style-type: none"> <li>3.1 Identifying measuring devices based on materials to be measured</li> <li>3.2 Obtaining specification of measuring devices from relevant document</li> <li>3.3 Taking measurement according to the job requirements</li> </ul>



	<p>3.4 Identifying tolerance and clearance limits and adjusting according to the job requirements</p> <p>3.5 Performing calculations for quantities of materials</p> <p>3.6 Conforming and recording measurements as per standard</p>
4. Underpinning attitudes	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Promptness in carrying out activities</p> <p>4.3 Sincere and honest to duties</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 for rights of peers and seniors in workplace</p> <p>4.8 Communication with peers and seniors in workplace</p>
5. Resource implications	<p>The following resources must be provided:</p> <p>5.1 Workplace (actual or simulated)</p> <p>5.2 Availability of quality tools and materials required</p> <p>5.3 Information on standard operating procedures (SOP),</p> <p>5.4 OSH, and other policies and guidelines</p> <p>5.5 Relevant specifications and work instructions</p> <p>5.6 Fire extinguisher</p> <p>5.7 Uninterrupted power supply</p>
6. Methods of assessment	<p>Competency should be assessed by</p> <p>6.1 Demonstration</p> <p>6.2 Oral questioning</p> <p>6.3 Written test</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><b>Accreditation Requirements</b></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>	

<b>Unit Code and Title</b>	<b>SU-RMGT-03-L3-V1: Interpret Sketch and Specifications in Manuals</b>
<b>Nominal Hours</b>	<b>15 Hours</b>
<b>Unit Descriptor</b>	This unit covers the knowledge, skills and attitude required for interpret sketches and specifications in manuals.  It specially includes identifying information from manual, interpreting sketch and specification.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <b><u>Bold and Underlined</u></b> terms are elaborated in the Range of Variables.
1. Identify information from manual	1.1. Appropriate <b><u>manuals</u></b> are collected as per sample 1.2. Importance of manuals is recognized 1.3. Required information are collected from manuals
2. Interpret sketch and specifications	2.1 Relevant <b><u>sketch</u></b> and <b><u>specifications</u></b> are identified 2.2 Key terms and abbreviations are identified 2.3 Signs and symbols are identified 2.4 Schedules, dimensions, drawings and specifications are interpreted
<b>Range of Variables</b>	
<b>Variables</b>	<b>Range</b> (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. Sketch	2.1 Technical sketch 2.2 Measurement sketch
3. Specifications	3.1 Product specifications 3.2 Performance specifications 3.3 Method specifications
<b>Evidence Guide</b>	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	Assessment required evidence that the candidate: 1.1. collected information from manual as per sample 1.2. identified sketches and specifications as per sample
2. Underpinning knowledge	2.1 Themes on various types of RMG manuals 2.2 Units of measurement

	2.3 Units of conversion 2.4 Rules of sketch, drawings and specifications
3. Underpinning skills	3.1 Recognising importance of manual 3.2 Selecting appropriate manuals as per sample 3.3 Collecting information from manual as per sample 3.4 Interpreting schedules, dimensions, drawings and specifications
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 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect for rights of peers and seniors in workplace 4.8 Communication with peers and seniors in workplace
5. Resource implications	The following resources must be provided: 5.1 Workplace (actual or simulated) 5.2 Availability of quality tools and materials required 5.3 Information on standard operating procedures (SOP), 5.4 OSH, and other policies and guidelines 5.5 Relevant specifications and work instructions 5.6 Fire extinguisher 5.7 Uninterrupted power supply
6. Methods of assessment	Competency should be assessed by 6.1 Demonstration 6.2 Oral questioning 6.3 Written test
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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# **Occupation Specific Units of Competencies**

<b>Unit Code and Title</b>	<b>OU-RMGT-WSMO-01-L2-V1: Interpret Woven Fabrics and Garments</b>
<b>Nominal Hours</b>	<b>15 Hours</b>
<b>Unit Descriptor</b>	This unit covers the knowledge, skills and attitudes required to interpret woven fabrics and garments. It specifically includes interpreting woven fabrics, woven garments and handling procedures of woven fabrics.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <b><u>Bold and Underlined</u></b> terms are elaborated in the Range of Variables.
1. Interpret woven fabrics	1.1 Woven fabrics are identified 1.2 <b><u>Woven fabrics</u></b> are interpreted 1.3 <b><u>Properties of woven fabrics</u></b> are recognized
2. Interpret woven garments	2.1. Woven garments are identified 2.2. <b><u>Woven garments</u></b> are interpreted
3. Interpret handling procedures of woven fabrics	3.1 <b><u>Safety and health issues</u></b> in handling of woven fabric is interpreted 3.2 Woven fabric is properly handled
<b>Range of Variables</b>	
<b>Variables</b>	<b>Range</b> (may include but not limited to):
1. Woven fabrics	1.1 Denim 1.2 Poplin 1.3 Linen 1.4 Flannel 1.5 Cord 1.6 Gabardine 1.7 Taffeta 1.8 Georget 1.9 Crepe
2. Properties of woven fabrics	2.1 Smoothness 2.2 Flexibility 2.3 Elasticity 2.4 Hand feel
3. Woven garments	3.1. Shirt 3.2. Pant 3.3. Jacket 3.4. Skirt 3.5. Dress
4. Safety and health issues	4.1 Exposer to fabric dust 4.2 Skin irritation due to chemical 4.3 Skin abrasion

	4.4 Eye nose and throat irritation
<b>Evidence Guide</b>	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	Assessment required evidence that the candidate: 1.1 interpreted woven fabrics 1.2 interpreted woven garments 1.3 interpreted handling procedures of woven fabric
2. Underpinning knowledge	2.1 Types of woven fabrics 2.2 Properties of woven fabrics 2.3 Types of woven garments 2.4 Handling procedures of woven fabrics 2.5 Safety and health issues
3. Underpinning skills	3.1 Interpreting woven fabrics 3.2 Recognizing properties of woven fabrics 3.3 Interpreting woven garments 3.4 Handling procedures of woven fabrics
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 Tidiness and timeliness 4.5 Respect for rights of peers and seniors in workplace 4.6 Communication with peers and seniors in workplace
5. Resource implications	5.1 Workplace (actual or simulated) 5.2 Tools and equipment 5.3 Woven fabrics 5.4 Woven garments 5.5 Work instruction
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
<b>Accreditation Requirements</b>	
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.	

<b>Unit Code and Title</b>	<b>OU-RMGT-WSMO-02-L2-V1: Prepare for Sewing Operation</b>
<b>Nominal Hours</b>	<b>35 Hours</b>
<b>Unit Descriptor</b>	<p>This unit covers the knowledge, skills, and attitudes required to prepare for sewing operation.</p> <p>It specifically includes identifying pattern and garments parts, garments machine, tools and materials, applying the attachments of sewing machine and set up machine for operation.</p>
<b>Elements of Competency</b>	<p><b>Performance Criteria</b>  <b><u>Bold and Underlined</u></b> terms are elaborated in the Range of Variables.</p>
1. Identify pattern and garments parts	<p>1.1 <b><u>Types of patterns</u></b> are interpreted</p> <p>1.2 Working pattern is identified as per design and measurements</p> <p>1.3 <b><u>Garments parts</u></b> and marking area are identified</p> <p>1.4 Bundles are identified as per selected job</p>
2. Identify machine, tools and materials	<p>2.1. <b><u>Machines</u></b> are identified as per job requirement</p> <p>2.2. <b><u>Tools</u></b> are identified as per job requirement</p> <p>2.3. <b><u>Materials</u></b> are identified as per job requirement</p> <p>2.4. Tools, machine and materials are prepared as per job requirement</p>
3. Apply the attachments of sewing machine	<p>3.1 <b><u>Types of attachments</u></b> of sewing machine are identified</p> <p>3.2 Attachments of sewing machine are applied as per job requirements</p>
4. Set up machine for operation	<p>4.1 Machine is cleaned</p> <p>4.2 Lubricant is checked as per oil level</p> <p>4.3 <b><u>Safety guards</u></b> are checked and used as per job requirement</p> <p>4.4 <b><u>Machine parts</u></b> are checked and adjusted</p> <p>4.5 <b><u>Type of needles</u></b> are selected according to materials, sewing manuals</p> <p>4.6 Tension of the stitches are checked and set</p> <p>4.7 Machine is checked to ensure the width of the stitch</p> <p>4.8 Power supply of machine is ensured</p>
<b>Range of Variables</b>	
<b>Variables</b>	<b>Range (may include but not limited to):</b>
1. Types of patterns	<p>1.1. Fabric pattern</p> <p>1.2. Finished pattern</p>

2. Garments parts	<p>2.1 <b>Shirts</b></p> <p>2.1.1 Front part</p> <p>2.1.2 Back part</p> <p>2.1.3 Yoke</p> <p>2.1.4 Sleeve</p> <p>2.1.5 Collar</p> <p>2.1.6 Collar band</p> <p>2.1.7 Cuff</p> <p>2.1.8 Placket</p> <p>2.1.9 Pocket</p> <p>2.1.10 Epaulet</p> <p>2.2 <b>Pants</b></p> <p>2.2.1 Front part</p> <p>2.2.2 Back part</p> <p>2.2.3 Back yoke</p> <p>2.2.4 Pocket</p> <p>2.2.5 Seam and facing</p> <p>2.2.6 Single fly</p> <p>2.2.7 Double fly</p> <p>2.2.8 Waist band</p> <p>2.2.9 Belt loops</p>
3. Machines	<p>3.1 Single needle lock stitch machine</p> <p>3.2 Double needle lock stitch machine</p> <p>3.3 Overlock machine</p> <p>3.4 Feed of the arm machine</p> <p>3.5 Flat lock machine</p> <p>3.6 Multi needle chain stitch machine</p> <p>3.7 Bar tack machine</p> <p>3.8 Button attaching machine</p> <p>3.9 Button hole machine</p>
4. Tools	<p>4.1 Scissors</p> <p>4.2 Thread cutter</p> <p>4.3 Screw driver</p> <p>4.4 Tweezers</p> <p>4.5 Scale</p> <p>4.6 Measurement tape</p> <p>4.7 Seam ripper</p>
5. Materials	<p>5.1 Fabrics</p> <p>5.2 Trims and accessories</p>
6. Types of attachments	<p>6.1. Feed</p> <p>6.2. Guide</p> <p>6.3. Folders</p>
7. Safety guards	<p>7.1 Motor guard</p>



	<ul style="list-style-type: none"> <li>7.2 Eye guard</li> <li>7.3 Belt guard</li> <li>7.4 Needle guard</li> <li>7.5 Pully cover</li> <li>7.6 Finger guard</li> <li>7.7 Rubber mat</li> </ul>
8. Machine parts	<ul style="list-style-type: none"> <li>8.1 Feed dog</li> <li>8.2 Needle bar and needle</li> <li>8.3 Tension post assembly</li> <li>8.4 Thread guide</li> <li>8.5 Pressure adjusting screw</li> <li>8.6 Throat plate</li> <li>8.7 Slide plate</li> <li>8.8 Stitch length regulator</li> <li>8.9 Thread stands</li> <li>8.10 Presser bar</li> <li>8.11 Presser foot</li> </ul>
9. Types of needles	<ul style="list-style-type: none"> <li>9.1 Universal</li> <li>9.2 Ball point</li> <li>9.3 Stretch</li> <li>9.4 Jeans/ Denim</li> <li>9.5 Sharp</li> <li>9.6 Self-threading</li> </ul>
<p><b>Evidence Guide</b></p> <p>The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.</p>	
1. Critical aspects of competency	<p>Assessment required evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 identified pattern and garments parts</li> <li>1.2 identified machine, tools and materials</li> <li>1.3 applied the attachments of sewing machine</li> <li>1.4 set up machine for operation</li> </ul>
2. Underpinning knowledge	<ul style="list-style-type: none"> <li>2.1 Types of patterns</li> <li>2.2 Garments parts</li> <li>2.3 Sewing machine</li> <li>2.4 Tools and materials</li> <li>2.5 Types of attachments</li> <li>2.6 Safety guards</li> <li>2.7 Machine parts</li> <li>2.8 Tension of the stitches</li> <li>2.9 Stitch per inch (SPI)</li> <li>2.10 Standard operating procedure (SOP)</li> <li>2.11 Sewing attachments</li> </ul>

3. Underpinning skills	3.1 Checking safety guards 3.2 Checking machine parts 3.3 Checking tension of the stitch 3.4 Checking sewing attachments
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 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect for rights of peers and seniors in workplace 4.8 Communication with peers and seniors in workplace
5. Resource implications	5.1 Workplace (actual or simulated) 5.2 Tools and equipment 5.3 Fire extinguisher 5.4 Uninterrupted power supply
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><b>Accreditation Requirements</b></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>	

<b>Unit Code and Title</b>	<b>OU-RMGT-WSMO-03-L2-V1: Operate Industrial Sewing Machine</b>
<b>Nominal Hours</b>	<b>100 Hours</b>
<b>Unit Descriptor</b>	<p>This unit covers the knowledge, skills, and attitudes required to operate industrial sewing machine.</p> <p>It specifically includes following safety procedure at workplace, operating single needle machine, double needle machine, overlock machine, feed of the arm machine, flat lock machine, multi needle chain stitch machine and maintaining and cleaning workplace.</p>
<b>Elements of Competency</b>	<p><b>Performance Criteria</b>  <b><u>Bold and Underlined</u></b> terms are elaborated in the Range of Variables.</p>
1. Follow safety procedure at workplace	<p>1.1 Occupational safety and health (OHS) is followed and <b><u>personal protective equipment (PPE)</u></b> is used as per job requirements</p> <p>1.2 Safety guards are checked as per job requirements</p> <p>1.3 Machine is cleaned and checked as per safety procedures</p>
2. Operate single needle machine	<p>2.1. <b><u>Single needle machine</u></b> is started and checked for normal operation</p> <p>2.2. Necessary adjustments are made to confirm to workplace requirements</p> <p>2.3. Woven fabric are sewed using single needle machine as per design and style requirement</p> <p>2.4. Quality of stitch is maintained as per sample</p> <p>2.5. <b><u>Unusual operating conditions</u></b> are observed during operation and reported to authority</p>
3. Operate double needle machine	<p>3.1. Double needle machine is started and checked for normal operation</p> <p>3.2. Necessary adjustments are made to confirm to workplace requirements</p> <p>3.3. Woven fabric are sewed using double needle machine as per design and style requirement</p> <p>3.4. Quality of stitch is maintained as per sample</p> <p>3.5. Unusual operating conditions are observed during operation and reported to authority</p>
4. Operate overlock machine	<p>4.1. Overlock machine is started and checked for normal operation</p> <p>4.2. Necessary adjustments are made to confirm to workplace requirements</p> <p>4.3. Woven fabric are sewed using overlock machine as per design and style requirement</p>

	<p>4.4. Quality of stitch is maintained as per sample</p> <p>4.5. Unusual operating conditions are observed during operation and reported to authority</p>
5. Operate feed of the arm machine	<p>5.1. Feed of the arm machine is started and checked for normal operation</p> <p>5.2. Necessary adjustments are made to confirm to workplace requirements</p> <p>5.3. Woven fabric are sewed using feed of the arm machine as per design and style requirement</p> <p>5.4. Quality of stitch is maintained as per sample</p> <p>5.5. Unusual operating conditions are observed during operation and reported to authority</p>
6. Operate flat lock machine	<p>6.1. Flat lock machine is started and checked for normal operation</p> <p>6.2. Necessary adjustments are made to confirm to workplace requirements</p> <p>6.3. Woven fabric are sewed using flat lock machine as per design and style requirement</p> <p>6.4. Quality of stitch is maintained as per sample</p> <p>6.5. Unusual operating conditions are observed during operation and reported to authority</p>
7. Operate multi needle chain stitch machine	<p>7.1. Multi needle chain stitch machine is started and checked for normal operation</p> <p>7.2. Necessary adjustments are made to confirm to workplace requirements</p> <p>7.3. Woven fabric are sewed using multi needle chain stitch machine as per design and style requirement</p> <p>7.4. Quality of stitch is maintained as per sample</p> <p>7.5. Unusual operating conditions are observed during operation and reported to authority</p>
8. Maintain and clean workplace	<p>8.1. Machine is switched off</p> <p>8.2. Waste materials are disposed as per workplace standard operating procedure (SOP)</p> <p>8.3. Machines are cleaned as per manufacturer instruction</p>
<b>Range of Variables</b>	
<b>Variables</b>	<b>Range (may include but not limited to):</b>
1. Personal protective equipment (PPE)	<p>1.1 Mask</p> <p>1.2 Safety shoes</p> <p>1.3 Apron</p> <p>1.4 Hand gloves</p> <p>1.5 Scarf</p>
2. Single needle machine	<p>2.1 Lock stitch machine</p> <p>2.2 Chain stitch machine</p>

3. Unusual operating condition	3.1 Unusual machine noise 3.2 Excess oil/ lubricant 3.3 Unusual needle breakage 3.4 Irregular stitch tension
<b>Evidence Guide</b> The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	Assessment required evidence that the candidate: <ol style="list-style-type: none"> <li>1.1 followed safety procedure at workplace</li> <li>1.2 operated single needle machine</li> <li>1.3 operated double needle machine</li> <li>1.4 operated overlock machine</li> <li>1.5 operated feed of the arm machine</li> <li>1.6 operated flat lock machine</li> <li>1.7 operated multi needle chain stitch machine</li> <li>1.8 maintained and cleaned workplace</li> </ol>
2. Underpinning knowledge	<ol style="list-style-type: none"> <li>2.1 Size and type of needle used in sewing of woven fabrics</li> <li>2.2 Procedure and techniques of winding and setting of bobbins in accordance with machine manufacture’s requirements</li> <li>2.3 Machine threading procedure and techniques</li> <li>2.4 Operation and maintenance of single needle, overlock, flatlock machine</li> <li>2.5 Sewing methods and techniques on woven materials using different types of woven machines</li> <li>2.6 Machine &amp; workplace cleaning procedures</li> </ol>
3. Underpinning skills	<ol style="list-style-type: none"> <li>3.1 Checking safety guards</li> <li>3.2 Interpreting operating conditions during operation</li> <li>3.3 Cleaning and checking sewing machine</li> <li>3.4 Interpreting sewing procedure of woven fabric</li> <li>3.5 Operating sewing machine</li> </ol>
4. Underpinning attitudes	<ol style="list-style-type: none"> <li>4.1 Commitment to occupational health and safety</li> <li>4.2 Promptness in carrying out activities</li> <li>4.3 Sincere and honest to duties</li> <li>4.4 Environmental concerns</li> <li>4.5 Eagerness to learn</li> <li>4.6 Tidiness and timeliness</li> <li>4.7 Respect for rights of peers and seniors in workplace</li> <li>4.8 Communication with peers and seniors in workplace</li> </ol>
5. Resource implications	<ol style="list-style-type: none"> <li>5.1 Workplace (simulated or actual)</li> <li>5.2 Tools, equipment</li> <li>5.3 Sewing machine</li> <li>5.4 Availability of materials</li> </ol>

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><b>Accreditation Requirements</b></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>	

<b>Unit Code and Title</b>	<b>OU-RMGT-WSMO-04-L2-V1: Make Pants</b>
<b>Nominal Hours</b>	<b>115 Hours</b>
<b>Unit Descriptor</b>	This unit covers the knowledge, skills, and attitudes required to make pants. It specifically includes following safety procedures at workplace, interpreting process of making pants, performing stitch operation for pants, checking stitch quality of pants and maintaining and cleaning workplace.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <b><u>Bold and Underlined</u></b> terms are elaborated in the Range of Variables.
1. Follow safety procedure at workplace	1.1. Occupational safety and health (OHS) is followed and personal protective equipment (PPE) is used as per job requirements 1.2. Safety guards are checked as per job requirements
2. Interpret process of making pants	2.1. <b><u>Parts of pants</u></b> are identified as per job requirements 2.2. Processes of making pants are interpreted as per job requirements 2.3. Stitch operation for pants are interpreted as per SOP 2.4. Assembling operation of pants parts are interpreted as per SOP 2.5. Individual capacity is identified based on Standard Minute Value (SMV) 2.6. Production target and efficiency are interpreted
3. Perform stitch operation for pants	3.1. <b><u>Tools and materials</u></b> are selected and collected 3.2. Materials are arranged as per job requirement 3.3. Stitch operations of front part are carried out as per job requirements 3.4. Stitch operations of back part are carried out as per job requirements 3.5. Assembling operation of pant parts are performed 3.6. Excess threads are trimmed as per job requirements
4. Check stitch quality of pants	4.1. Stitch quality is checked as per sample 4.2. <b><u>Stitch defects</u></b> are identified and rectified 4.3. Quality is checked as per standard
5. Maintain and clean workplace	5.1. Machine is switched off 5.2. Waste materials are disposed as per workplace standard operating procedure (SOP) 5.3. Machines are cleaned as per manufacturer instruction
<b>Range of Variables</b>	
<b>Variables</b>	<b>Range</b> (may include but not limited to):
1. Parts of pants	1.1 Front part 1.2 Back part

	<ul style="list-style-type: none"> <li>1.3 Back yoke</li> <li>1.4 Pocket</li> <li>1.5 Seam and facing</li> <li>1.6 Single fly</li> <li>1.7 Double fly</li> <li>1.8 Waist band</li> <li>1.9 Belt loops</li> </ul>
2. Tools and materials	<p><b>Tools</b></p> <ul style="list-style-type: none"> <li>2.1. Scissors</li> <li>2.2. Thread cutter</li> <li>2.3. Screw driver</li> <li>2.4. Tweezers</li> <li>2.5. Scale</li> <li>2.6. Measurement tape</li> <li>2.7. Seam ripper</li> </ul> <p><b>Materials</b></p> <ul style="list-style-type: none"> <li>2.8. Fabrics</li> <li>2.9. Trims and Accessories</li> </ul>
3. Stitch defects	<ul style="list-style-type: none"> <li>3.1 Broken stitch</li> <li>3.2 Puckering</li> <li>3.3 Loose stitch</li> <li>3.4 Wrinkles</li> <li>3.5 Skip stitch</li> <li>3.6 Down stitch</li> <li>3.7 Floating stitch</li> <li>3.8 Uneven stitch</li> <li>3.9 Slipped stitch</li> <li>3.10 Stagger stitch</li> </ul>
<p><b>Evidence Guide</b></p> <p>The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.</p>	
1. Critical aspects of competency	<p>Assessment required evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 followed safety procedure at workplace</li> <li>1.2 interpreted process of making pants</li> <li>1.3 performed stitch operation for pants</li> <li>1.4 checked stitch quality of pants</li> <li>1.5 maintained and cleaned workplace</li> </ul>
2. Underpinning knowledge	<ul style="list-style-type: none"> <li>2.1 Safety guards</li> <li>2.2 Tools and materials</li> <li>2.3 Pant making process</li> <li>2.4 Stitching operation</li> <li>2.5 Assembling operations of pant</li> <li>2.6 Stitching quality</li> <li>2.7 Stitch defects</li> </ul>



	2.8 Standard minute value (SMV) 2.9 Production target and efficiency 2.10 Material handling procedure
3. Underpinning skills	3.1 Checking safety guards 3.2 Carrying out stitching operations of front part 3.3 Carrying out stitching operations of back part 3.4 Performing assembling operation of pant parts 3.5 Checking stitch quality 3.6 Checking quality
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 Eagerness to learn 4.6 Tidiness and timeliness
5. Resource implications	5.1 Workplace (simulated or actual) 5.2 Safety guards 5.3 Sewing machine 5.4 Tools and 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
<p><b>Accreditation Requirements</b></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

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The Competency Standards for National Skills Certificate in Woven Sewing Machine Operation, Level-2 is developed by SEIP on 6<sup>th</sup> September 2016.

### List of Members

1.	Mr. Durlov Chandra Kha, Senior Instructor, Garments, BGTTC, Dhaka.	Member
2.	Mr. Yusuf Hossain, Chief Instructor (Industry Trainer), BGMEA Training Institute.	Member
3.	Mr. Md Shah Alam Majumder, Specialist (Course Accreditation), BTEB	Member
4.	Mr. Syed Nasir Ershad, AEPD, SEIP	Member
5.	Mr. Ahsan Habib, TVET Specialist, SEIP	Member
6.	Md. Mohiuzzaman, Course Specialist, SEIP	Member



## Validation of Competency Standard

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The Competency Standards for National Skills Certificate in Woven Sewing Machine Operation, Level-2 is validated by NSDA on 12<sup>th</sup> September 2022.

### List of Members

Sl No	Name and Address	Position in the committee	Signature
1.	Mr. Mohammad Nasir, Chairperson, RTISC	Chairperson	
2.	Md. Aminul Islam Bulbul, Asst Manager (IE), Manta Apparel Limited, Dhaka, Cell: 01725691582, Email: <a href="mailto:aminul.bulbul_05@yahoo.com">aminul.bulbul_05@yahoo.com</a>	Member	
3.	Md. Rafiqul Islam, Deputy Manager (IE), Production Planning & Coordination Division, Envoy Group, Cell: 01717461469, Email: <a href="mailto:rafiq.ie@envoy-group.com">rafiq.ie@envoy-group.com</a> , <a href="mailto:rafiq.mbstu007@gmail.com">rafiq.mbstu007@gmail.com</a>	Member	
4.	Md. Enamul Kabir, Assistant Professor, Textile Engineering Department, Primeasia University, Cell: +8801915601700, Email: <a href="mailto:rana1050@gmail.com">rana1050@gmail.com</a>	Member	
5.	Razib Chakrabarty, IE manager, Russel Garments, Cell: +8801777790168, Email: <a href="mailto:rajib.ie2@osmangroupbd.com">rajib.ie2@osmangroupbd.com</a> , <a href="mailto:razibierg@gmail.com">razibierg@gmail.com</a>	Member	
6.	Md. Farid Uddin, Executive Sewing, Shanta Industries Ltd. Cell: 01733451875, Email: <a href="mailto:faridkishorgonj@gmail.com">faridkishorgonj@gmail.com</a>	Member	
7.	Sharif Nowaz, Curriculum Development & Training Executive, Mobile: 01733459745, Email: <a href="mailto:sharifnowaz@gmail.com">sharifnowaz@gmail.com</a>	Member	
8.	Engr. Abdur Razzaque, Specialist-01, NSDA, Mobile: +88 01742734313, Email: <a href="mailto:razzaque159@gmail.com">razzaque159@gmail.com</a>	Member	
9.	Md. Amir Hossain, Process Expert, NSDA, Mobile: 01631670445, Email: <a href="mailto:razib.consultant@yahoo.com">razib.consultant@yahoo.com</a>	Member	



## Workshop Minutes

**Government of the People's Republic of Bangladesh**  
**Prime Minister's Office**  
**National Skills Development Authority**  
 Level: 10-11, Biniyog Bhaban,  
 E-6 / B, Agargaon, Sher-E-Bangla Nagar Dhaka-1207, Bangladesh.  
 Email: [ec@nsda.gov.bd](mailto:ec@nsda.gov.bd)  
 Website: [www.nsda.gov.bd](http://www.nsda.gov.bd)

Minutes of the Competency Standard Validation Workshop on “Woven Sewing Machine Operation” Occupation.

Chairman	: Mr. Mohammed Nasir, Chairman, RT, ISC
Date	: 12 <sup>th</sup> September 2022
Time	: 8:00 am - 3:00 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 “Woven Sewing Machine Operation” 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	Yes		The name of the occupation as "Woven Sewing Machine Operation"
2.	Nominal Hour	Yes		360 hours
3.	Unit of Competency		No.	Following changes are made: <ul style="list-style-type: none"> <li>Carry out machine performance is merged to other unit of competency</li> </ul>
4.	Element		No.	<ul style="list-style-type: none"> <li>Total 05 elements are edited</li> <li>03 element is added or deleted</li> </ul>
5.	Performance Criteria		No.	<ul style="list-style-type: none"> <li>Total 15 performance criteria edited and finetuned as per elements</li> </ul>
6.	Variables		No.	<ul style="list-style-type: none"> <li>23 new variables are added</li> </ul>
7.	Critical Aspect of Competence		No.	<ul style="list-style-type: none"> <li>Necessary changes have been made in the critical aspect of competency according to above changes.</li> </ul>
8.	Underpinning knowledge		No.	<ul style="list-style-type: none"> <li>Necessary changes have been made in the underpinning knowledge according to above changes.</li> </ul>
9.	Underpinning Skills		No.	<ul style="list-style-type: none"> <li>Necessary addition, changes and finetuning have been made.</li> </ul>
10.	Attitude	Yes		
11.	Resources	Yes		
12.	Assessment methods	Yes		

13.	Others			<ul style="list-style-type: none"> <li>• The nominal hours of the units of competencies have been rescheduled for content consideration.</li> <li>• Overall, the occupation has been included in Level-2 according to NSQF (BNQF 1-6).</li> </ul>
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Through the above activities, the Competency Standard has been finalized and validated as “**Woven Sewing Machine Operation, Level-2**”

**Chairman**

Committee on Standard and Curriculum Validation,

Chairman – RMG & TEXTILE ISC