



COMPETENCY STANDARD

Laptop Servicing and Maintenance

Level: 03

(ICT Sector)

Competency Standard Code: CS-ICT-LSM-L3-EN-V1



**National Skills Development Authority
Chief Adviser's Office
Government of the People's Republic of Bangladesh**

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This Competency Standard for Laptop Servicing and Maintenance 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 ICT Sector ISC, 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. "Laptop Servicing and Maintenance" is selected as one of the priority occupations of ICT 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 under Bangladesh National Qualification Framework (BNQF) 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 guides

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 Skills Certificate – Level-3 in Laptop Servicing and Maintenance in ICT Sector

Level Descriptors of 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

General	
NSDA	National Skills Development Authority
BMET	Bureau of Manpower Employment and Training
ILO	International Labor Organization
ISC	Industry Skills Council
NPVC	National Pre-Vocation Certificate
NSQF	National Skills Qualifications Framework
PPP	Public Private Partnership
SCVC	Standards and Curriculum Validation Committee
SEIP	Skills for Employment Investment Program
STP	Skills Training Provider
UoC	Unit of Competency
GU	Generic Unit
SU	Sector Unit
OU	Occupation Unit
Occupation Specific	
GUI	Graphical User Interface
ESD	Electro-static Discharge
ICT	Information Communication Technology (ICT)
KPI	Key Performance Indicator
LCD	Liquid Crystal Display
OSH	Occupational safety and health
PPE	Personal protective equipment
RAM	Random Access Memory
USB	Universal serial bus
LSM	Laptop Servicing and Maintenance
OS	Operating System
VDU	Visual Display Unit
CD	Compact Disc
DVD	Digital Video Disc” or “Digital Versatile Disc.”
ASCII	American Standard Code for Information Interchange
CV	Curriculum Vitae
CPU	Central Processing Unit

Approval of Competency Standard

Approved by
--th Executive Committee (EC) Meeting of NSDA
Held on --- 2025

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

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**Competency Standards for National Skill Certificate – 3 in
Laptop Servicing and Maintenance in ICT Sector**

Course Structure

SL	Unit Code and Title		UoC Level	Nominal Duration (Hours)
Generic Units of Competencies				35
1.	GU008L2V1	Work in a Team Environment	2	20
2.	GU-15-L4-V1	Develop Entrepreneurship Skills	4	15
Sector Specific Units of Competencies				110
3.	SU-ICT-01-L2-V1	Practice Occupational Safety and Health (OSH) Standard in ICT	2	15
4.	SU-ICT-03-L3-V1	Comply to Ethical Standards in the ICT Workplace	3	15
5.	SU-ICT-05-L3-V1	Use Internet and Access Resources	3	30
6.	SU-ICT-LSM-12-L3-V1	Maintain Inventory and Participate in Professional Development Activities	3	20
7.	SU-ICT-LSM-13-L3-V1	Communicate with Customer and Provide Customer Service	3	30
Occupation Specific Units of Competencies				215
8.	OU-ICT-LSM-01-L3-V1	Conduct Diagnostics and Assess Laptop Performance	3	60
9.	OU-ICT-LSM-02-L3-V1	Troubleshoot and Repair Software Issues	3	75
10.	OU-ICT-LSM-03-L3-V1	Perform Hardware Repair and Maintenance	3	80
Sub Total				360
Workplace Visit				20
Total Nominal Learning Hours				380

Units & Elements at Glance

Generic Units of Competencies

Code	Unit of Competency	Elements of Competency	Duration (Hours)
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
GU-15-L4-V1	Develop Entrepreneurship Skills	<ol style="list-style-type: none"> 1. Recognize concept of Entrepreneurship 2. Explain functions of Entrepreneur 3. Explain role of Entrepreneur in Economic Development 4. Plan for Business and marketing 5. Explain small business 6. Interpret reasons of failure and success in small business 	15

Sector Specific Units of Competencies

Code	Unit of Competency	Elements of Competency	Duration (Hours)
SU-ICT-10-L2-V1	Practice Occupational Safety and Health (OSH) Standard in ICT	<ol style="list-style-type: none"> 1. Identify hazard and risk in the ICT Environment 2. Apply Personal Health and Safety Practices 3. Manage and Report Hazards 4. Respond to Emergencies 	15

SU-ICT-03-L3-V1	Comply to Ethical Standards in the ICT Workplace	<ol style="list-style-type: none"> 1. Uphold the requirements of clients 2. Deliver quality products and services 3. Maintain professionalism at workplace 4. Maintain workplace code of conduct. 	15
SU-ICT-05-L3-V1	Use Internet and Access Resources	<ol style="list-style-type: none"> 1. Prepare resources for sharing 2. Access Resources using the Internet 3. Use e-mail 	30
SU-ICT-LSM-12-L3-V1	Maintain Inventory and Participate in Professional Development Activities	<ol style="list-style-type: none"> 1. Maintain Inventory 2. Identify and Participate in Professional Development Activities 	20
SU-ICT-LSM-13-L3-V1	Communicate with Customer and Provide Customer Service	<ol style="list-style-type: none"> 1. Communicate with Customers 2. Provide Maintenance guidelines 3. Gather and Utilize Customer Feedback 	30

Occupation Specific Units of Competencies

Code	Unit of Competency	Elements of Competency	Duration (Hours)
OU-ICT-LSM-01-L3-V1	Conduct Diagnostics and Assess Laptop Performance	<ol style="list-style-type: none"> 1. Interpret electronic and electrical components 2. Perform Visual Inspections 3. Run Diagnostic Tests 4. Gather and Analyze Information 	60
OU-ICT-LSM-02-L3-V1	Troubleshoot and Repair Software Issues	<ol style="list-style-type: none"> 1. Install and Configure Operating Systems 2. Diagnose Software Issues 3. Remove Malware and Viruses 4. Troubleshoot Network Issues 	75
OU-ICT-LSM-03-L3-V1	Perform Hardware Repair and Maintenance	<ol style="list-style-type: none"> 1. Disassemble and Reassemble Laptops 2. Replace Faulty Components 3. Perform Hardware Upgrades 4. Maintain Laptop externals and internals cleanliness 	80

Generic Units of Competencies

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 defining team role and scope, identifying individual role and responsibility. Participating in team discussions and working as a team member.
Nominal Hours	20 Hours
Elements of Competency	Performance Criteria Bold & Underlined 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 team members 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. Sources of information	1.1 Standard Operating Procedures 1.2 Job Description 1.3 Operations Manual 1.4 Organizational Structure
2. Team Members	2.1. Coach/mentor 2.2. Supervisor/Manager 2.3. Peers/Colleagues 2.4. Employee representative
3. Workplace context	3.1 National Laws and Statutes 3.2 Standard Operating Procedures 3.3 Workplace Rules and Regulations
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 Performance Criteria and Range of Variables

2. Underpinning knowledge	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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. Underpinning Attitudes	<ul style="list-style-type: none"> 4.1 Commitment to occupational health and safety 4.2 Environmental concerns 4.3 Eagerness to learn 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	<ul style="list-style-type: none"> 5.1 Pens 5.2 Telephone 5.3 Computer 5.4 Writing materials 5.5 Online communication
6. Methods of assessment	<p>Methods of assessment may include but not limited to:</p> <ul style="list-style-type: none"> 6.1. Workplace observation 6.2. Demonstration 6.3. Oral questioning 6.4. Written test 6.5. Portfolio
7. Context of assessment	<ul style="list-style-type: none"> 7.1 Competency assessment must be done in NSDA accredited assessment center 7.2 Assessment should be done by a NSDA certified/nominated assessor
<p>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 BNQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.</p>	

Unit Code and Title	GU-15-L4-V1: Develop Entrepreneurship Skills
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to develop entrepreneurship skills. It specially includes the task of recognizing concept of entrepreneurship, functions of entrepreneur explaining role of entrepreneur in economic development, planning for business and marketing, explaining small business and Interpreting reasons of failure and success in small business.
Nominal Hours	15 Hours
Elements of Competency	Performance Criteria <u>Bold and Underlined</u> terms are elaborated in the Range of Variables
1. Recognize concept of Entrepreneurship	<ul style="list-style-type: none"> 1.1 Entrepreneurship is defined 1.2 Advantages of entrepreneurship is discussed 1.3 Strength, Weakness, Opportunity and Threat (SWOT) is analyzed for business 1.4 Methods of operating salon in profitable manner is discussed 1.5 Importance of controlling expenses and cost saving methods is discussed 1.6 The units of sale for different types of services are Identified 1.7 Future prospects of business are Identified
2. Explain functions of Entrepreneur	<ul style="list-style-type: none"> 2.1 Important aspects of business including selection business place, services to render & monetary matters are discussed 2.2 Different business situation and importance of compiling data regarding clients, income, expenses are discussed 2.3 Goals for sales of business is identified 2.4 Source and way of financing in small business is identified 2.5 Method for building a professional team is discussed
3. Explain role of Entrepreneur in Economic Development	<ul style="list-style-type: none"> 3.1 Plan to play vital role to boost economy by creating and providing new job opportunities are discussed 3.2 Method to develop hiring plan as per need of business and importance of depositing contributions in government departments are discussed 3.3 Methods to generate maximum profits and expansion plan of business is discussed
4. Plan for Business and marketing	<ul style="list-style-type: none"> 4.1 Business plan is prepared as per market demands. 4.2 Areas of business or services which are more profitable and popular in clients are identified

	<p>4.3 Services and products offered by the competitors is analyzed and business strategy is made accordingly</p> <p>4.4 Estimate of finance is prepared for required business</p> <p>4.5 Methods for attaining knowledge of current market trends are discussed</p>
5. Explain small business	<p>5.1 Small business is defined</p> <p>5.2 Money management and cash flows are explained</p> <p>5.3 Importance of customer satisfaction is discussed</p> <p>5.4 Customers comfort policies is explained</p> <p>5.5 Importance of maintenance of record of purchases, sales, inventory and list of regular customers are explained</p> <p>5.6 Branding of business is explained</p> <p>5.7 Methods to build team of honest workers on long term basis are explained</p>
6. Interpret reasons of failure and success in small business	<p>6.1 Fields of business causing loss is identified</p> <p>6.2 Key factor for selection of proper suitable location of business place easily accessible is discussed for customers.</p> <p>6.3 Factors annoying customers by action of workers are Identified</p> <p>6.4 Control of utility bills especially turning off extra lights and ACs when client is not in service discussed</p> <p>6.5 Importance to make purchases of best items keeping in view quality, quantity and prices are explained</p> <p>6.6 Communicate with the customers in effective conversation and good relations are discussed</p> <p>6.7 Time schedule is prepared for self-workers and services</p>
Range of Variables	
Variables	Range (may include but not limited to):
Evidence Guide	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical Aspects of Competency	<p>Assessment required evidence that the candidate:</p> <p>1.1 recognized concept of entrepreneurship</p> <p>1.2 functioned of entrepreneur</p> <p>1.3 explained role of entrepreneur in economic development</p> <p>1.4 planned for business and marketing</p> <p>1.5 explained small business</p> <p>1.6 interpreted reasons of failure and success in small business</p>
2. Underpinning Knowledge	<p>2.1 Describe the methods of running salon on profitable manner.</p> <p>2.2 Identify the cost saving methods.</p>

	<p>2.3 List the services generally offered in salon.</p> <p>2.4 Illustrate factors for forecasting of future market trends</p> <p>2.5 Explain the planning techniques for services, rates and location identification for better business opportunities.</p> <p>2.6 Describe the importance of client's data and skills for efficient financial controls of business.</p> <p>2.7 Define the techniques for Increasing sales of business</p> <p>2.8 Explain the Importance of team building.</p> <p>2.9 Explain the role of creating job opportunities in economy.</p> <p>2.10 Explain the importance of appropriate and suitable work force for the business, prevailing labor laws and prevailing taxes levied on the business.</p> <p>2.11</p> <p>2.12 Describe the important factors for expansion plan according to demand and supply position prevailing in market.</p> <p>2.13</p> <p>2.14 Explain market trends</p> <p>2.15 Define profitable and popular services of business.</p> <p>2.16 Describe the procedure of implementation of business and marketing plan.</p> <p>2.17 Calculate Capital requirements for business.</p> <p>2.18 State the possible sources of finance</p> <p>2.19 Define the techniques of money management.</p> <p>2.20 Describe the importance of customer's satisfaction and demands of clients.</p> <p>2.21 Explain the Importance of customer's comfort level in terms of prices and services.</p> <p>2.22 Illustrate the techniques of maintaining records of purchases, sales and client's data.</p> <p>2.23 Describe the major Fields of business causing loss.</p> <p>2.24 Explain the importance of easily accessible location for setting up business.</p> <p>2.25 Define the importance of good behavior of workers with the customers.</p> <p>2.26 Explain the methods of cost saving steps in salon.</p> <p>2.27 Illustrate method of purchases of materials competitively and cost efficiently</p> <p>2.28 Describe the importance of pleasant communication skills.</p> <p>2.29 Explain the importance of time management and the role of proper time</p>
3. Underpinning Skills	<p>3.1 Applying skills of communicating</p> <p>3.2 Applying skills of literacy and numeracy</p> <p>3.3 Analyzing business environment</p> <p>3.4 Planning for own business</p>

	<p>3.5 Using the effective tools to make presentations</p> <p>3.6 Identifying business places</p> <p>3.7 Identifying target customers</p> <p>3.8 Maintaining business plan</p> <p>3.9 Handling business promoting media and equipment</p>
4. Required 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 Fire extinguisher</p> <p>5.3 Uninterrupted power supply</p> <p>5.4 Internet facilities</p> <p>5.5 Adequate Surveillance devices</p> <p>5.6 Manuals, catalogs and magazine</p> <p>5.7 Competency Based Learning Materials (CBLM)</p>
6. Methods of Assessment	<p>Methods of assessment may include but not limited to:</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 center.</p> <p>7.2 Assessment should be done by 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 BNQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.</p>	

Sector Specific Units of Competencies

Unit Code and Unit Title	SU-ICT-10-L2-V1: Practice Occupational Safety and Health (OSH) Standard in ICT.
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to Practice Occupational Safety and Health (OSH) Standard in ICT. It includes identifying hazard and risk in the ICT Environment, applying Personal Health and Safety Practices, managing and Report Hazards and responding to Emergencies
Nominal Hours	15 Hours
Elements of Competency	Performance Criteria
1. Identify hazard and risk in the ICT Environment	<p>1.1 <u>Common safety and health risks</u> specific to IT workplaces are identified.</p> <p>1.2 <u>Workplace types and layout</u> and conditions are assessed for compliance with OSH standards.</p> <p>1.3 Types and appropriate usage of <u>Personal Protective Equipment (PPE)</u> for IT-related tasks are identified.</p> <p>1.4 <u>Hazards</u> are identified in ICT environment</p>
2. Apply Personal Health and Safety Practices	<p>2.1 <u>Ergonomically sound practices</u> are implemented including proper workstation setup and posture.</p> <p>2.2 <u>Preventive measures</u> are taken to reduce physical and mental strain.</p> <p>2.3 Cleanliness and orderliness in the workplace are maintained to reduce risks.</p> <p>2.4 Personal Protective Equipment (PPE) is worn and stored properly after use.</p> <p>2.5 Workplace safety conditions are inspected and issues are reported to the designated authority.</p>
3. Manage and Report Hazards	<p>3.1 Routine checks of the immediate work area are conducted to identify hazards and risks.</p> <p>3.2 Corrective actions are taken to mitigate risks within the scope of responsibility.</p> <p>3.3 Internet and social media addiction is minimized to enhance workplace focus and safety.</p> <p>3.4 Detail records of incidents, hazards, and corrective actions are maintained as per workplace standard</p> <p>3.5 Hazards, risks, and incidents are reported accurately and promptly to the designated authority.</p>
4. Respond to Emergencies	<p>4.1 <u>Emergencies</u> are identified and reported according to workplace protocols.</p> <p>4.2 <u>Workplace emergency response procedures</u> are followed effectively as per organizational policy during incidents.</p> <p>4.3 Basic first aid is administered or assistance is sought from qualified personnel as required.</p>
Range of Variables	

Variable	Range (may include but not limited to):
1. Common safety and health risks	<ul style="list-style-type: none"> 1.1 Ergonomics 1.2 Repetitive strain injuries 1.3 Eye strain 1.4 Radiation 1.5 Carpal tunnel syndrome 1.6 Electrical hazards.
2. Workplace Type and layout	<ul style="list-style-type: none"> 2.1 Hardware servicing labs 2.2 Software development rooms 2.3 IT Training Lab 2.4 Server room 2.5 Networking infrastructure
3. Personal Protective Equipment (PPE)	<ul style="list-style-type: none"> 3.1 Aprons, 3.2 Earplugs 3.3 Face mask 3.4 UV-protected eye ware 3.5 Anti-static wristband 3.6 Anti-static shoes. 3.7 Gloves
4. Hazards	<ul style="list-style-type: none"> 4.1 Physical Hazard <ul style="list-style-type: none"> 4.1.Cables running across the floor 4.2.Slippery floor 4.3.Dust 4.2 Mechanical Hazard <ul style="list-style-type: none"> 4.2.1. Computer case 4.3 Chemical Hazard <ul style="list-style-type: none"> 4.3.1. Display cleaning chemical 4.3.2. Keyboard cleaning chemical
5. Ergonomically sound practices	<ul style="list-style-type: none"> 5.1 Using adjustable seating 5.2 Maintaining proper posture 5.3 Ensuring proper lighting.
6. Preventive measures	<ul style="list-style-type: none"> 6.1. Regular breaks 6.2. Adequate lighting 6.3. Time management 6.4. Ergonomic furniture 6.5. Adequate ventilation
7. Emergencies	<ul style="list-style-type: none"> 7.1 Equipment failures/malfunctions 7.2 Fires 7.3 Electrical fires 7.4 Explosions 7.5 Natural disasters.
8. Workplace emergency response procedures	<ul style="list-style-type: none"> 8.1 First aid 8.2 Emergency treatment 8.3 Firefighting protocols 8.4 Evacuation plans
Evidence Guide	
1. Critical aspects of competency	<ul style="list-style-type: none"> Assessment required evidence that the candidate: <ul style="list-style-type: none"> 1.1 Identified and mitigated OSH issues in IT workplaces.

	<ul style="list-style-type: none"> 1.2 Ensured a safe and hygienic work environment. 1.3 Reported hazards and followed emergency procedures. 1.4 Prevented and addressed social media/internet addiction. 1.5 Demonstrate the ability to identify and manage workplace hazards. 1.6 Demonstrated observance of safety procedures and ergonomic practices. 1.7 Followed emergency response procedures effectively.
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 OSH policies, regulations, and standards for IT workplaces. 2.2 Common hazards in IT environments 2.3 Emergency response procedures and safety protocols. 2.4 Principles of Occupational Safety and Health (OSH). 2.5 Common IT workplace hazards and associated risks 2.6 Workplace safety regulations and organizational policies
3. Underpinning skills	<ul style="list-style-type: none"> 3.1 Safe operation and maintenance of IT equipment and tools 3.2 Practical application of ergonomic practices 3.3 Documenting incidents and communicating with relevant personnel 3.4 Effective communication of safety concerns to peers and supervisors 3.5 Ability to respond promptly to emergencies
4. Required attitudes	<ul style="list-style-type: none"> 4.1 Commitment to maintaining a safe and healthy work environment 4.2 Proactive approach to identifying and mitigating risks 4.3 Accountability for personal and workplace safety 4.4 Cooperation and respect for peers, supervisors, and safety policies 4.5 Willingness to participate in training and continuous improvement efforts 4.6 Mindfulness to avoid workplace distractions like excessive use of social media
5. Resource implication	<ul style="list-style-type: none"> 5.1 IT workplace setup (actual or simulated). 5.2 PPE and safety equipment. 5.3 Workplace policies and emergency response documentation.
6. Methods of Assessment	<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 center. 7.2. Assessment should be done by 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 BNQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.

Unit Code and Title	SU-ICT-04-L3-V1: Comply to Ethical Standards in the ICT Workplace
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to comply to ethical standards in the ICT workplace. It specifically includes the task of upholding the requirements of clients, delivering quality products and services, maintaining professionalism at workplace, and maintaining workplace code of conduct.
Nominal Hours	15 Hours
Elements of Competency	Performance Criteria <u>Bold and Underlined</u> terms are elaborated in the Range of Variables
1. Uphold the requirements of clients	1.1 Clients' requirements are identified. 1.2 Confidentiality of information is maintained in accordance with workplace policies / organizational policies/ national legislation. 1.3 Potential conflicts of interest are identified and involved parties of potential conflicts are notified. 1.4 Proprietary rights of client/customer is asserted.
2. Deliver quality products and services	2.1. Products and services are provided according to the clients' requirements. 2.2. Work is completed as per standards. 2.3. Quality processes are implemented when developing products and services.
3. Maintain professionalism at workplace	3.1 Work processes are delivered as per standards. 3.2 Skills, knowledge and qualifications are presented in a professional manner. 3.3 Services and products developed by self and others are delivered as per workplace standard. 3.4 Unbiased and objective information are provided to clients. 3.5 Realistic estimates for time, cost and delivery of outputs are presented during negotiation.
4. Maintain workplace code of conduct.	4.1 Workplace code of conduct are interpreted 4.2 Workplace code of conduct is followed.
Range of variables	
Variables	Range (may include but not limited to):
Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency	

1. Critical aspects of competency	<p>Assessment required evidence that the candidate:</p> <ol style="list-style-type: none"> 1.1 asserted proprietary rights of client/customer. 1.2 completed work to industry and international standards. 1.3 implemented quality processes when developing products and services. 1.4 delivered services and products developed by self and others. 1.5 provided unbiased and objective information to clients. 1.6 followed workplace code of conduct.
2. Underpinning knowledge	<ol style="list-style-type: none"> 2.1. Corporate code of confidentiality of information 2.2. organizational policies, national legislation and workplace policies in relation to IT sector 2.3. Law and regulations pertaining to proprietary rights 2.4. Quality processes for products and services 2.5. Procedure of provided to client information 2.6. Method of estimating for time, cost and delivery products and services 2.7. Workplace code of conduct in IT sector
3. Underpinning Skills	<ol style="list-style-type: none"> 3.1. Upholding confidentiality of information in accordance with organizational policies, national legislation and workplace policies 3.2. Asserting proprietary rights of client/customer 3.3. Completing work in accordance with industry and international standards 3.4. Implementing quality processes when developing products and services 3.5. Delivering correctly services and products developed by self and others 3.6. Providing unbiased and objective information are to clients. 3.7. Presenting realistic estimates for time, cost and delivery of outputs during negotiation 3.8. Following workplace code of conduct
4. Underpinning Attitudes	<ol style="list-style-type: none"> 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	<p>The following resources must be provided:</p> <ol style="list-style-type: none"> 5.1 Relevant tools, Equipment, software and facilities needed to perform the activities. 5.2 Required learning materials.

6. Methods of Assessment	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 center. 7.2. Assessment should be done by 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 BNQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.</p>	

Unit Code and Title	OU-ICT-05-L3-V1: Use Internet and Access Resources
Unit Descriptor	This unit covers the knowledge, skills, and attitudes required to use the internet and access resources. It specifically includes the task of preparing resources for sharing, accessing resources using the internet, and using and managing e-mail.
Nominal Hours	30 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables
1. Prepare resources for sharing	1.1 <u>The document</u> is scanned with the required <u>file format</u> 1.2 The file is converted using <u>file conversion tools</u> 1.3 File <u>compression tools</u> are used for compression and extraction. 1.4 Multiple PDF documents are joined (if required)
2. Access Resources using the Internet	2.1. The internet <u>browser</u> is selected and installed. 2.2. <u>Browser setting</u> is carried out for smooth operation. 2.3. Resources are accessed using <u>Search engines.</u> 2.4. Resources are preserved in local storage.
3. Use e-mail	3.1 E-mail account is created with a selected <u>e-mail service provider.</u> 3.2 <u>E-mail operations</u> are performed as required 3.3 E-mail messages are printed.
Range of Variables	
Variable	Range (may include but not limited to):
1. Document	1.1 Single Page document 1.2 Multiple-page document 1.3 Picture 1.4 Signature
2. File format	2.1. .jpeg 2.2. .png 2.3. .pdf
3. File conversion tools	3.1 Offline Tools (Default application) 3.1.1. .doc/ .docx to .pdf, 3.1.2. .xls/ .xlsx to .pdf, 3.1.3. .ppt/ .pptx to .pdf, 3.1.4. .jpg to .pdf 3.2 Offline Tools (PDF to Others) 3.2.1. PDF converter 3.2.2. PDF Editor 3.2.3. Foxit PDF Editor

	<p>3.2.4. Adobe PDF Editor</p> <p>3.3 Online Tools</p> <p>3.3.1. www.ilovepdf.com</p> <p>3.3.2. www.pdf2go.com</p> <p>3.3.3. https://pdf2doc.com/</p>
4. Compression tools	<p>4.1. WinZip</p> <p>4.2. WinRAR</p> <p>4.3. 7zip</p>
5. Browsers	<p>5.1. Microsoft Edge</p> <p>5.2. Google Chrome</p> <p>5.3. Mozilla Firefox</p> <p>5.4. Opera</p> <p>5.5. Safari</p> <p>5.6. Duronto browser</p>
6. Browser setting	<p>6.1 Bookmark</p> <p>6.2 Privacy and security</p> <p>6.3 Language</p> <p>6.4 Download</p> <p>6.5 Cookies</p> <p>6.6 History</p>
7. Search engines	<p>7.1 google</p> <p>7.2 Yahoo</p> <p>7.3 Ask</p> <p>7.4 MSN</p> <p>7.5 Bing</p> <p>7.6 Pipilika</p> <p>7.7 Duckduckgo</p> <p>7.8 AltaVista</p>
8. E-mail Service Provider	<p>8.1. Free mail services</p> <p>8.1.1. Gmail</p> <p>8.1.2. Yahoo</p>
9. Email Operations	<p>9.1. Compose</p> <p>9.2. Send</p> <p>9.2.1. Attachment</p> <p>9.2.2. Single Recipient</p> <p>9.2.3. Multiple Recipient</p> <p>9.2.4. CC</p> <p>9.2.5. BCC</p> <p>9.3. Receive</p> <p>9.4. Reply</p> <p>9.5. Forward</p> <p>9.6. Delete</p>

Evidence Guide

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

1.Critical Aspects of Competency	The assessment required evidence that the candidate: 1.1 Prepared resources for sharing: Scanning, converting, compressing, and merging files 1.2 Accessed resources using the Internet: Installing and configuring browsers, using search engines, and managing downloads. 1.3 Used and operated e-mail: Creating accounts, composing, sending, receiving, replying, forwarding, and printing emails.
2.Underpinning knowledge	2.1 Understanding the Internet and the World Wide Web (WWW). 2.2 Familiarity with URLs, web browsers, and websites. 2.3 Web Browsers like Chrome, Firefox, Edge, etc. 2.4 Websites 2.5 URLs 2.6 Search Engines like Google, Bing, DuckDuckGo, etc. 2.7 Effective search strategies for locating resources online 2.8 Awareness of copyright and fair use policies. 2.9 Bookmarks, privacy, cookies, and history cleaning. 2.10 History of the cleaning process. 2.11 Platforms for connecting with others and sharing information 2.12 The importance of equal access to technology and the Internet 2.13 Use of file conversion tools (offline and online) for various formats: DOC, PDF, JPG, XLS, etc. 2.14 Use of file Compressing and extracting tools like WinRAR, 7zip, or WinZip. 2.15 Managing different document types: single-page, multi-page, images, and signatures. 2.16 Creating accounts on platforms like Gmail or Yahoo. 2.17 Performing email operations (sending with CC/BCC, attaching files, replying, forwarding). 2.18 Understanding online responsibilities, including privacy, respectful communication, and data security.
3.Underpinning skills	3.1 Accessing and sharing resources from the Internet. 3.2 Downloading/uploading files, documents, and videos from/to websites. 3.3 Managing email operations with attachments, recipients, and printing 3.4 Performing responsibly and ethically online. 3.5 Respecting copyright laws and promoting safe Internet use.
4.Required attitudes	4.1 Commitment to occupational safety and health. 4.2 Promptness in carrying out activities. 4.3 Sincere and honest to duties.

	<p>4.4 Eagerness for understanding processes related to document preparation and email management.</p> <p>4.5 Environmental Concerns.</p> <p>4.6 Respect for the rights of peers, subordinates, and seniors at the workplace.</p> <p>4.7 Ensuring the confidentiality and reliability</p> <p>4.8 Communicates clearly and effectively with peers, subordinates, and supervisors in the workplace.</p> <p>4.9 Acknowledging the importance of equal access to technology.</p> <p>4.10 Maintains a clean and orderly workstation.</p> <p>4.11 Ensures timeliness and tidiness in daily tasks.</p>
<p>5.Resource implications</p>	<p>The following resources must be provided:</p> <p>5.1 Workplace (actual or simulated).</p> <p>5.2 Projector or interactive whiteboard for demonstrations.</p> <p>5.3 Desktop or laptop computers with sufficient specifications to run Pre-installed software.</p> <p>5.4 Printer (laser or inkjet) with various printing capabilities (single/both sides, odd/even pages).</p> <p>5.5 USB pen drives, portable hard drives, and optical disks for file transfer practice.</p> <p>5.6 Internet access for cloud-based applications like Google Docs and updates for installed software.</p> <p>5.7 Adjustable chairs and desks for ergonomic typing practice.</p> <p>5.8 Training manuals, Handouts, or guides detailing software use, customization, animations, and file management.</p> <p>5.9 Examples/Pre-designed presentation templates for different purposes (business, educational, portfolios</p> <p>5.10 Operating Systems: Windows, macOS, or Linux pre-installed on training computers.</p> <p>5.11 Web Browsers: Google Chrome, Mozilla Firefox, Microsoft Edge, Opera, Safari</p> <p>5.12 File Conversion Tools: Offline Tools: Microsoft Office Suite (Word, Excel, and PowerPoint with PDF export options). Adobe Acrobat or Foxit PDF Editor for PDF editing and conversion. Online Tools: Websites like ilovepdf.com, pdf2go.com, and pdf2doc.com.</p> <p>5.13 Compression Tools: WinRAR, 7zip, and WinZip.</p> <p>5.14 Free email service providers (e.g., Gmail, Yahoo) for hands-on training in email operations.</p> <p>5.15 Search engines for practice: Google, Bing, DuckDuckGo, etc.</p> <p>5.16 Training manuals covering the curriculum on email operations, file management, and internet usage.</p>

	<p>5.17 Short, practical video tutorials on tasks like scanning documents, compressing files, and creating emails.</p> <p>5.18 Single-page and multi-page documents in various file formats (e.g., .docx, .pdf, .jpg).</p> <p>5.19 Signature and image files for editing and merging exercises.</p>
6.Methods of assessment	<p>Methods of assessment may include but are not limited to:</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 center.</p> <p>7.2 Assessment should be done by NSDA-certified/ nominated assessor</p>
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by the 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 BNQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.</p>	

Unit Code Title	SU-ICT-LSM-12-L3-V1: Maintain Inventory and Participate in Professional Development Activities
Unit Descriptor	This unit covers the competencies required to maintain inventory of spare parts and components, as well as the continuous professional development necessary to keep up-to-date with industry trends and practices.
Nominal Hours	20 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables)
1. Maintain Inventory	<p>1.1 Inventory levels of spare parts and components are monitored and maintained using <u>inventory tools</u>.</p> <p>1.2 Stock records are updated accurately to reflect inventory changes.</p> <p>1.3 Orders for replenishing/restocking inventory are placed timely to avoid shortages.</p> <p>1.4 Received inventory is checked against purchase orders for accuracy and quality.</p> <p>1.5 Inventory storage is organized to facilitate easy access and identification.</p> <p>1.6 Damaged or obsolete parts are identified and disposed of following company policies.</p> <p>1.7 Reports on inventory usage and trends are prepared and analyzed for decision-making.</p>
2. Identify and Participate in Professional Development Activities	<p>2.1. Training opportunities for <u>professional development activities</u> relevant to servicing are identified and undertaken.</p> <p>2.2. Participation in professional development activities is recorded and reported.</p> <p>2.3. New skills and techniques learned from professional development activities are practiced.</p> <p>2.4. Industry publications and resources are reviewed regularly to stay informed about new trends.</p> <p>2.5. Feedback from <u>various sources</u> is requested and used to improve skills and knowledge.</p> <p>2.6. A personal development plan is maintained and goals are set for continuous improvement.</p>
Range of Variables	
Variable	Range (may include but not limited to):
1. Inventory Tools	<p>1.1 Inventory management software</p> <p>1.2 Spreadsheets</p> <p>1.3 Barcode scanners.</p>

2. Professional Development Activities	2.1 Training courses 2.2 Workshops, certifications 2.3 Conferences 2.4 Online courses
3. Various Sources	3.1 Supervisors 3.2 Peers 3.3 Customer reviews 3.4 Performance evaluations
Evidence Guide The evidence must be authentic, valid, sufficient, reliable, and meet all requirements of current version of the Unit of Competency.	
1. Critical aspects of competency	Assessment required evidence that the candidate: <ol style="list-style-type: none"> 1.1 Managed inventory levels to ensure the availability of necessary parts and components. 1.2 Updated and maintained accurate stock records reflecting current inventory status. 1.3 Participated in professional development activities to keep skills current. 1.4 Applied newly acquired knowledge from training to improve repair techniques.
2. Underpinning knowledge	<ol style="list-style-type: none"> 2.1 Principles of inventory management and control. 2.2 Specifications and applications of various components. 2.3 Available resources for professional development in the industry. 2.4 Methods for obtaining and using feedback for personal improvement.
3. Underpinning skills	<ol style="list-style-type: none"> 3.1 Monitoring and updating inventory records regularly. 3.2 Ordering and receiving parts to maintain stock levels. 3.3 Engaging in training to enhance technical skills and knowledge. 3.4 Implementing new techniques learned from professional development in the workplace.
4. Required attitudes	<ol style="list-style-type: none"> 4.1 Commitment to occupational safety and health. 4.2 Promptness in carrying out activities. 4.3 Sincere and honest to duties. 4.4 Eagerness to learn the document preparation process. 4.5 Tidiness and timeliness. 4.6 Environmental concerns. 4.7 Respect for the rights of peers, subordinates and seniors at the workplace. 4.8 Communication with peers, subordinates and seniors in the workplace. 4.9 Keeps a clean and orderly workplace and equipment.

5. Resource implication	<p>The following resources must be provided:</p> <p>5.1 Workplace (actual or simulated).</p> <p>5.2 Tools, equipment and physical facilities appropriate to perform activities.</p> <p>5.3 Materials consumable to perform activities.</p>
6. Methods of assessment	<p>Methods of assessment may include but not limited to:</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 center.</p> <p>7.2 Assessment should be done by 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 BNQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.</p>	

Unit Code Title	SU-ICT-LSM-13-L3-V1: Communicate with Customer and Provide Customer Service
Unit Descriptor	This unit cover skills, knowledge and attitude on effectively communicating with customers about technical issues, providing updates, and guiding them on basic maintenance and troubleshooting.
Nominal Hours	30 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables)
1. Communicate with Customers	<p>1.1 Technical issues are explained clearly to customers in a non-technical language.</p> <p>1.2 Regular updates on the repair status are communicated to customers through appropriate <u>communication channels</u>.</p> <p>1.3 <u>Customer queries</u> are addressed promptly, and solutions are provided in a friendly and professional manner.</p> <p>1.4 Feedback from customers is gathered and recorded using <u>various tools</u> to improve service quality.</p> <p>1.5 Customers are informed about <u>service agreement details</u>.</p>
2. Provide Maintenance guidelines	<p>2.1 Basic maintenance tips are provided to customers to prevent common issues.</p> <p>2.2 Instructions on using security software and performing regular system updates are demonstrated.</p> <p>2.3 Safe handling and proper storage of laptops are explained to the customers.</p> <p>2.4 Customers are informed about the importance of regular system protection.</p> <p>2.5 <u>Support resources</u> are recommended for further assistance.</p>
3. Gather and Utilize Customer Feedback	<p>3.1 Feedback from customers is gathered systematically through structured feedback forms or surveys.</p> <p>3.2 Feedback is analyzed to identify areas for service improvement.</p> <p>3.3 Changes in service practices are completed based on customer feedback.</p> <p>3.4 Customer satisfaction levels are monitored and reported regularly.</p>
Range of Variables	
Variable	Range (may include but not limited to):
1. Communication channels	<p>1.1 In-person</p> <p>1.2 Phone</p> <p>1.3 Email</p>

	1.4 Online platform
2. Customer queries	2.1 Technical queries 2.2 Repair status updates 2.3 Maintenance advice
3. Various tools	3.1 Customer feedback forms 3.2 Instructional materials 3.3 CRM systems
4. Service agreement details	4.1 Repair costs 4.2 Timelines 4.3 Warranty terms
5. Support resources	5.1 User manuals 5.2 Online help
<p>Evidence Guide The evidence must be authentic, valid, sufficient, reliable 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> <p>1.1 Communicated technical issues and maintenance advice clearly to customers.</p> <p>1.2 Provided regular updates on repair status through appropriate communication channels.</p> <p>1.3 Educated customers on basic maintenance practices to prolong laptop life.</p> <p>1.4 Gathered and utilized customer feedback to enhance service quality.</p>
2. Underpinning knowledge	<p>2.1 Principles of customer service and effective communication.</p> <p>2.2 Basic laptop maintenance tips and practices.</p> <p>2.3 Techniques for managing customer relationships and expectations.</p> <p>2.4 Tools for collecting and analyzing customer feedback.</p>
3. Underpinning skills	<p>3.1 Engaging with customers to understand and address their concerns.</p> <p>3.2 Explaining technical information in a clear and accessible manner.</p> <p>3.3 Advising customers on best practices for laptop maintenance.</p> <p>3.4 Using feedback to make informed improvements to service delivery.</p>

4. Required attitudes	4.1 Commitment to occupational safety and health. 4.2 Promptness in carrying out activities. 4.3 Sincere and honest to duties. 4.4 Eagerness to learn the document preparation process. 4.5 Tidiness and timeliness. 4.6 Environmental concerns. 4.7 Respect for the rights of peers, subordinates and seniors at the workplace. 4.8 Communication with peers, subordinates and seniors in the workplace. 4.9 Keeps a clean and orderly workplace and equipment.
5. Resource implication	The following resources must be provided: 5.1 Workplace (actual or simulated). 5.2 Tools, equipment and physical facilities appropriate to perform activities. 5.3 Materials consumable to perform activities.
6. Methods of assessment	Methods of assessment may include but not limited to: 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 center. 7.2 Assessment should be done by 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 BNQF. 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 Title	OU-ICT-LSM-01-L3-V1: Conduct Diagnostics and Assess Laptop Performance
Unit Descriptor	This unit covers the skills and knowledge required to conduct diagnostics and assessments on laptops. It specially includes interpreting electronic and electrical components identifying potential issues through visual inspections, diagnostic tests, and customer interactions.
Nominal Hours	60 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables)
1. Interpret electronic and electrical components	<p>1.1 Common <u>electronic and electrical components</u> are identified using visual and label-based identification methods.</p> <p>1.2 Common electronic and electrical components are interpreted.</p> <p>1.3 Components are listed according to label-based identification methods.</p>
2. Perform Visual Inspections	<p>2.1. Laptops are visually inspected for physical damage or irregularities.</p> <p>2.2. Signs of wear, cracks, or loose components are identified and documented.</p> <p>2.3. <u>External and Internal components</u> are inspected to identify physical damage or trash.</p> <p>2.4. <u>External ports and connectors</u> are inspected to identify physical damage or trash.</p> <p>2.5. <u>Internal port and connectors</u> are checked for signs of dust accumulation or overheating.</p>
3. Run Diagnostic Tests	<p>3.5 <u>Diagnostic tools and software</u> are selected and used to run hardware and software tests.</p> <p>3.6 Test results are analyzed to identify <u>hardware faults</u> or software malfunctions.</p> <p>3.7 Diagnostic logs are saved and reviewed for detailed analysis.</p> <p>3.8 Tests are repeated (if necessary) to confirm findings and ensure accuracy.</p>
4. Gather and Analyze Information	<p>4.1. Customer reports and usage patterns are gathered to understand the issues.</p> <p>4.2. Collected data is analyzed to pinpoint the root cause of the problem.</p> <p>4.3. Previous repair history is reviewed to identify recurring issues.</p>

	<p>4.4. Clear and concise diagnostic reports are prepared and presented to customers or supervisors.</p> <p>4.5. Cleanup procedures for excess solder and flux residues are performed.</p>
Range of Variables	
Variable	Range (may include but not limited to):
1. Electronic and electrical components	<p>1.1 Electronic components</p> <p>1.1.1. Diode</p> <p>1.1.2. LED</p> <p>1.1.3. Transistor</p> <p>1.1.4. Crystal</p> <p>1.1.5. IC / Chip</p> <p>1.1.6. MOSFET</p> <p>1.1.7. UJT</p> <p>1.1.8. Zener Diode</p> <p>1.2 Electrical components</p> <p>1.2.1. Resistor</p> <p>1.2.2. Inductor</p> <p>1.2.3. Capacitor</p> <p>1.2.4. Transformer</p> <p>1.2.5. Fuse</p>
2. External and Internal components	<p>2.1 External components</p> <p>2.1.1 Top cover</p> <p>2.1.2 Bezel</p> <p>2.1.3 Display Panel</p> <p>2.1.4 Uppercase</p> <p>2.1.4.1 Keyboard</p> <p>2.1.4.2 Touch pad</p> <p>2.1.5 Bottom cover</p> <p>2.1.6 External Battery</p> <p>2.1.7 DC Adapter</p> <p>2.1.8 AC Power Cable</p> <p>2.2 Internal components</p> <p>2.2.1 Motherboard</p> <p>2.2.2 CPU/SOC</p> <p>2.2.3 Graphical processing unit (GPU)</p> <p>2.2.4 Hard disk</p> <p>2.2.5 Optical drive</p> <p>2.2.6 Internal Bluetooth Module</p> <p>2.2.7 Speaker</p> <p>2.2.8 WiFi Module</p> <p>2.2.9 RAM</p> <p>2.2.10 SSD</p>

	<ul style="list-style-type: none"> 2.2.10.1 SATA 2.2.10.2 NVMe 2.2.10.3 M.2 2.2.11 Cooling Fan 2.2.12 Battery 2.2.13 CMOS battery 2.2.14 Heat sink 2.2.15 Hinge 2.2.16 Microphone 2.2.17 Web cam
3. External ports and connectors	<ul style="list-style-type: none"> 3.1 USB Port 3.2 Ethernet Port 3.3 USB Type-C 3.4 Thunderbolt port 3.5 DisplayPort 3.6 HDMI Port 3.7 EMC Slot/ SD Card Reader 3.8 Audio Port 3.9 Charging DC port
4. Internal port and connectors	<ul style="list-style-type: none"> 4.1 SATA Port 4.2 Internal Bluetooth Slot 4.3 Speaker connector 4.4 Flat ribbon cable connector 4.5 LVDS Cable connector 4.6 Keyboard connector 4.7 RAM slot 4.8 SSD Slot 4.8.1 SATA slot 4.8.2 NVMe slot 4.8.3 M.2 slot 4.9 Touch pad connector 4.10 Battery connector
5. Diagnostic Tools and Software	<ul style="list-style-type: none"> 5.1 Hardware diagnostics software 5.2 Visual inspection tools/ magnifying glass 5.3 Customer feedback forms.
6. Hardware faults	<ul style="list-style-type: none"> 6.1 Faulty RAM 6.2 Storage device problem 6.3 No display problem 6.4 Dead motherboard problem 6.5 Automatic restarting error 6.6 Hanging problem 6.7 Charging & discharging faults 6.8 Dim screen faults 6.9 Automatic power off problem 6.10 Date and time error 6.11 Blue screen error

	<ul style="list-style-type: none"> 6.12 Heating faults 6.13 Fan not working faults 6.14 Motherboard shorting faults 6.15 Leakage problem 6.16 USB not working faults 6.17 Webcam (camera) errors 6.18 Wi-Fi not working 6.19 Sound-related faults 6.20 Network-related problems 6.21 Touchpad not working 6.22 Keyboard not working faults 6.23 Bluetooth and card reader problem 6.24 White screen faults 6.25 Hinge problem 6.26 BIOS problem 6.27 Finger Print problem
7. Software malfunctions	<ul style="list-style-type: none"> 7.1 System crashes 7.2 Security and Malware Issues 7.3 Slow Performance 7.4 Unresponsive Applications 7.5 Driver issues 7.6 Software Installation Errors 7.7 File Corruption
<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 Conducted visual inspections to detect physical damage and irregularities. 1.2 Applied diagnostic tools and software to run effective tests. 1.3 Analyzed test results to pinpoint hardware and software issues. 1.4 Documented findings clearly for communication to the customer or technical team. 1.5 Followed up on diagnostic findings to ensure resolution of identified problems.
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Types and causes of common laptop issues. 2.2 Principles of operation for diagnostic tools. 2.3 Standard procedures for conducting hardware and software diagnostics. 2.4 Methods for gathering and utilizing customer-provided information.

	2.5 Importance of documenting diagnostic processes.
3. Underpinning skills	<p>3.1 Conducting thorough visual inspections to identify physical laptop issues.</p> <p>3.2 Using diagnostic tools and software to assess hardware and software performance.</p> <p>3.3 Interpreting diagnostic data to determine the root causes of malfunctions.</p> <p>3.4 Communicating diagnostic findings effectively to customers or colleagues.</p> <p>3.5 Recording and maintaining detailed diagnostic reports for future reference.</p>
4. Required attitudes	<p>4.1 Commitment to occupational safety and health.</p> <p>4.2 Promptness in carrying out activities.</p> <p>4.3 Sincere and honest to duties.</p> <p>4.4 Eagerness to learn the document preparation process.</p> <p>4.5 Tidiness and timeliness.</p> <p>4.6 Environmental concerns.</p> <p>4.7 Respect for the rights of peers, subordinates and seniors at the workplace.</p> <p>4.8 Communication with peers, subordinates and seniors in the workplace.</p> <p>4.9 Keeps a clean and orderly workplace and equipment.</p>
5. Resource implication	<p>The following resources must be provided:</p> <p>5.1 Workplace (actual or simulated).</p> <p>5.2 Tools, equipment and physical facilities appropriate to perform activities.</p> <p>5.3 Materials consumable to perform activities.</p>
6. Methods of assessment	<p>Methods of assessment may include but not limited to:</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 center.</p> <p>7.2 Assessment should be done by 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 BNQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.</p>	

Unit Code Title	OU-ICT-LSM-02-L3-V1: Troubleshoot and Repair Software Issues
Unit Descriptor	This unit covers the skills and knowledge required to diagnose and resolve software issues, install operating systems, remove malware, and troubleshoot network connectivity.
Nominal Hours	75 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables)
1. Install and Configure Operating Systems	<p>1.1 <u>Operating systems</u> are selected based on hardware compatibility.</p> <p>1.2 Installation media are prepared and verified.</p> <p>1.3 BIOS configuration is performed as per requirements.</p> <p>1.4 Operating systems are installed following standard procedures.</p> <p>1.5 System settings and drivers are configured after installation.</p>
2. Diagnose Software Issues	<p>2.1. Symptoms of software issues are documented.</p> <p>2.2. <u>Diagnostic tools</u> are used to identify <u>software issues</u>.</p> <p>2.3. Problematic applications or drivers are reinstalled or updated.</p> <p>2.4. System logs are reviewed to trace software faults.</p>
3. Remove Malware and Viruses	<p>3.1 <u>Antivirus and anti-malware tools</u> are used to scan systems.</p> <p>3.2 Infections are quarantined and removed following protocols.</p> <p>3.3 System performance is monitored post-removal.</p> <p>3.4 Security settings are adjusted to prevent future infections.</p>
4. Troubleshoot Network Issues	<p>4.1 Network connections are checked for physical faults.</p> <p>4.2 Network configuration settings are reviewed and adjusted.</p> <p>4.3 <u>Connectivity issues</u> are resolved using standard procedures.</p> <p>4.4 Network security settings are tested and updated.</p>
Range of Variables	
Variable	Range (may include but not limited to):
1. Operating systems	<p>1.1 Windows</p> <p>1.2 MacOS</p> <p>1.3 Linux Operating Systems</p>

2. Diagnostic tools	<ul style="list-style-type: none"> 2.1 Diagnostic Utilities 2.2 Antivirus Software 2.3 Network Analyzers
3. Software issues	<ul style="list-style-type: none"> 3.1 Driver Conflicts 3.2 Malware Infections 3.3 OS Corruption
4. Antivirus and anti-malware tools	<ul style="list-style-type: none"> 4.1 McAfee 4.2 Bitdefender 4.3 Norton 360 4.4 Avast 4.5 Microsoft Defender 4.6 AVG AntiVirus 4.7 Kapersky Security 4.8 ESET Cyber Security 4.9 Avira 4.10 Panda Security 4.11 Malwarebytes 4.12 TotalAV 4.13 Hitmanpro 4.14 ADwcleaner
5. Connectivity issues	<ul style="list-style-type: none"> 5.1. Wi-Fi connectivity 5.2. Ethernet setup 5.3. Network configuration
<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 Installed and configured operating systems to ensure compatibility and performance. 1.2 Diagnosed and resolved common software issues such as crashes and slowdowns. 1.3 Removed malware and viruses using updated security tools. 1.4 Configured and troubleshooted network settings to restore connectivity.
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Installation and configuration processes for different operating systems. 2.2 Identification and resolution techniques for software-related problems. 2.3 Tools and methods for malware detection and removal.

	2.4 Basics of network configuration and common connectivity issues.
3. Underpinning skills	3.1 Installing and configuring operating systems as per requirements. 3.2 Diagnosing software issues and applying appropriate fixes. 3.3 Using security tools to remove malware and ensure system integrity. 3.4 Troubleshooting network connectivity and resolving configuration errors.
4. Required attitudes	4.1 Commitment to occupational safety and health. 4.2 Promptness in carrying out activities. 4.3 Sincere and honest to duties. 4.4 Eagerness to learn the document preparation process. 4.5 Tidiness and timeliness. 4.6 Environmental concerns. 4.7 Respect for the rights of peers, subordinates and seniors at the workplace. 4.8 Communication with peers, subordinates and seniors in the workplace. 4.9 Keeps a clean and orderly workplace and equipment.
5. Resource implication	The following resources must be provided: 5.1 Workplace (actual or simulated). 5.2 Tools, equipment and physical facilities appropriate to perform activities. 5.3 Materials consumable to perform activities.
6. Methods of assessment	Methods of assessment may include but not limited to: 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 center. 7.2 Assessment should be done by 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 BNQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.

Unit Code Title	OU-ICT-LSM-03-L3-V1: Perform Hardware Repair and Maintenance
Unit Descriptor	This unit covers the skills and knowledge required to disassemble and reassemble laptops, replace faulty components, perform hardware upgrades, and maintain external and internal cleanliness.
Nominal Hours	80 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables)
1. Disassemble and Reassemble Laptops	<p>1.1 Anatomy of laptops and functions of internal components are interpreted.</p> <p>1.2 Personal protective equipment (PPE) is used during disassembling and reassembling.</p> <p>1.3 Safety guidelines for handling electronic components are followed to prevent ESD damage.</p> <p>1.4 <u>Tools and equipment</u> are selected and prepared for disassembly.</p> <p>1.5 Laptops are disassembled according to manufacturer guidelines and safe condition.</p> <p>1.6 <u>External and Internal components</u> are carefully handled to avoid damage maintaining safe handling procedures.</p> <p>1.7 Laptops are reassembled following disassembly procedures.</p>
2. Replace Faulty Components	<p>2.1. Faulty components are identified.</p> <p>2.2. Replacement components are selected based on specifications.</p> <p>2.3. Components are replaced using proper techniques and tools.</p> <p>2.4. System functionality is tested after component replacement.</p>
3. Perform Hardware Upgrades	<p>3.1 Upgrade requirements are identified based on system performance.</p> <p>3.2 Suitable upgrade components are selected.</p> <p>3.3 Hardware upgrades are performed according to guidelines.</p> <p>3.4 Upgraded systems are tested for improved performance.</p>
4. Maintain Laptop externals and internals cleanliness	<p>4.1 External components are cleaned to remove dust and trash.</p> <p>4.2 Internal components are cleaned to remove dust and trash.</p> <p>4.3 <u>Cooling systems</u> are checked and cleaned.</p> <p>4.4 Heat sinks and thermal paste are inspected and replaced if necessary.</p> <p>4.5 Preventative maintenance schedules are followed.</p> <p>4.6 Workspaces are kept clean and free from hazards to maintain safety standards.</p>

Range of Variables	
Variable	Range (may include but not limited to):
1. Tools and equipment	<ul style="list-style-type: none"> 1.1 Screwdrivers set 1.2 Spudgers/Opener 1.3 Anti-static wristbands 1.4 Cleaning brushes 1.5 Cleaning Agents 1.6 Multimeter 1.7 Tweezers 1.8 Pliers 1.9 Both side tape
2. External and Internal components	<ul style="list-style-type: none"> 2.1 External components <ul style="list-style-type: none"> 2.1.1 Top cover 2.1.2 Bezel 2.1.3 Display Panel 2.1.4 Uppercase <ul style="list-style-type: none"> 2.1.4.1 Keyboard 2.1.4.2 Touch pad 2.1.5 Bottom cover 2.1.6 External Battery 2.1.7 DC Adapter 2.1.8 AC Power Cable 2.1.9 Laptop Screw (different size) 2.2 Internal components <ul style="list-style-type: none"> 2.2.1 Motherboard 2.2.2 CPU/SOC 2.2.3 Graphical processing unit (GPU) 2.2.4 Hard disk 2.2.5 Optical drive 2.2.6 Internal Bluetooth Module 2.2.7 Speaker 2.2.8 WiFi Module 2.2.9 RAM 2.2.10 SSD <ul style="list-style-type: none"> 1.2.10.1. SATA 1.2.10.2. NVMe 1.2.10.3. M.2 2.2.11 Cooling Fan 2.2.12 Battery 2.2.13 CMOS battery 2.2.14 Heat sink 2.2.15 Hinge 2.2.16 Laptop Screw (different size)

3. Cooling systems	<ul style="list-style-type: none"> 3.1 Fans 3.2 Vents 3.3 Heat sinks 3.4 Thermal paste
<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 Disassembled and reassembled laptops accurately following safety protocols. 1.2 Replaced faulty hardware components and ensured functionality. 1.3 Upgraded hardware components to meet performance requirements. 1.4 Maintained internal cleanliness to optimize cooling and prevent damage. 1.5 Checked the functionality of repaired or upgraded laptops to ensure they meet performance standards.
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Anatomy of laptops and functions of internal components. 2.2 Techniques for safe and effective hardware disassembly and reassembly. 2.3 Procedures for identifying and replacing faulty components. 2.4 Methods for upgrading hardware components. 2.5 Importance of internal cleanliness in maintaining laptop performance.
3. Underpinning skills	<ul style="list-style-type: none"> 3.1 Disassembling laptops carefully to avoid damaging components. 3.2 Identifying and replacing faulty hardware effectively. 3.3 Upgrading laptop components according to performance needs. 3.4 Cleaning internal parts to enhance cooling and operation. 3.5 Testing repaired or upgraded laptops to confirm proper functionality.

4. Required attitudes	4.1 Commitment to occupational safety and health. 4.2 Promptness in carrying out activities. 4.3 Sincere and honest to duties. 4.4 Eagerness to learn the document preparation process. 4.5 Tidiness and timeliness. 4.6 Environmental concerns. 4.7 Respect for the rights of peers, subordinates and seniors at the workplace. 4.8 Communication with peers, subordinates and seniors in the workplace. 4.9 Keeps a clean and orderly workplace and equipment.
5. Resource implication	The following resources must be provided: 5.1 Workplace (actual or simulated). 5.2 Tools, equipment and physical facilities appropriate to perform activities. 5.3 Materials consumable to perform activities.
6. Methods of assessment	Methods of assessment may include but not limited to: 6.1 Written test 6.2 Demonstration 6.3 Oral questioning
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Development of Competency Standard

The Competency Standards for National Skills Certificate in Laptop Servicing and Maintenance, Level-3 is developed by NSDA on 19-21 January 2025.

List of Members

S/N	Name and Address	Position in the committee	Signature and Date
1.	Anowar Hossain, Laptop Hardware Technician, IT Solution BD, Email: anowar1992444@gmail.com Mobile: 01940-929800	Member	
2.	Motiur Rahman, System Engineer, Flora Limited Motijheel, Dhaka, Email: motiur.milon455525@gmail.com Mobile number. 01780679676	Member	
3.	Sheikh Riaz Uddin, Ryans Care Ltd, Senior Engineer (L3), Email: shaikhriaz@ryans.com Mobile: 01711-002828	Member	
4.	Md. Saiful Islam, Senior Engineer, Newtech Technology, Senior Trainer, NITC, Email: saiful_kawser@yahoo.com Mobile: 01720211430	Member	
5.	Md. Giash Uddin Howlader, Chief Engineer-Circuit Specialist, Newtec Technology. Email: giashsmart@gmail.com Mobile: 01720037200	Member	
6.	Md. Alamgir Hossain, Assistant Engineer, Newtech Technology and Assistant Manager, Newtech IT Training Center. Email: arefin.ece.09@gmail.com Mobile: 01757-457898.	Member	
7.	Md. Rasel Mia, Proprietor, Noor Computer. Email: email@aliasgorpavel.com , Mobile: 01711873008	Member	
8.	Md. Anisuzzaman, Instructor (Computer), Rajshahi TTC, Email: mazaman84@gmail.com , Mobile: 01714422225	Member	
9.	Md. Saif Uddin, Junior Assessment Consultant, National Skills Development Authority, Email: engrbd.saif@gmail.com , Mobile: 01723004419.	Member	

Validation of Competency Standard

The Competency Standards for National Skills Certificate in **Laptop Servicing and Maintenance, Level-3** is validated by NSDA on 16 February 2025.

Members of the SCVC

S/N	Name and Address	Position in the committee	Signature and Date
1.	Shafquat Haider, Chairman, ICT ISC, ciproco@bol-online.com , shafquat.haider@gmail.com, Mobile No. 01711532597	Chairperson	
2.	Md Shamim Hasan Support Engineer, L3, Ryans Computer Mobile: 01701072680 Email: shamimhasan@ryans.com	Member	
3.	MD. Giash Uddin Howlader Chief Engineer-Circuit Specialist, Newtec Technology, Mobile: 01720-037200 Email: giashsmart@gmail.com	Member	
4.	Md. Rasel Miah Proprietor, Noor Computer, Email: noorservice@gmail.com Mobile: 01716750048	Member	
5.	Muhammed Harun Ar Rashid Engineer, L2, Best Tech Center Monile: 01767253510 Email: harunr2030@gmail.Com	Member	
6.	Md. Sohel Rana Sr. Engineer, L2, Instinct Technologies Mobile: 01721236764 Email: sohel8519@gmail.com	Member	
7.	Md. Saif Uddin, Junior Assessment Consultant, National Skills Development Authority, Email: engrbd.saif@gmail.com , Mobile: 01723004419.	Member	

Workshop Minutes

Government of the People's Republic of Bangladesh
 Chief Adviser'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
 Website: www.nsd.gov.bd.

Minutes of the Competency Standard Validation Workshop on “Laptop Servicing and Maintenance, Level 3” Occupation.

Chairman	: Shafquat Haider, Chairperson
Date	: 16 February 2025
Time	: 9:00am - 5:00 pm
Place	: ISC Conference Room, NSDA, Biniyog Bhaban, Agargaon, Dhaka-1207

The Chairman welcomed all those present and started the work of the workshop. During the day-long workshop, the competency standard of Laptop Servicing and Maintenance, Level 3 occupation was reviewed and finalized in detail. The activities related to the finalized standard through validation workshop are presented below:

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 proposed occupation Laptop Servicing and Maintenance is split up into two occupations namely Laptop Servicing and Maintenance, Level 3 and Laptop Servicing and Maintenance, Level 4.
2.	Nominal Hour	Yes		360 hours.
3.	Unit of Competency	Yes		
4.	Element	Yes		
5.	Performance Criteria	Yes		
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 readjusted for content consideration. ▪ Overall, the occupation has been included in Level-3 according to BNQF 1-6.

Through the above activities, the Competency Standard has been reviewed, finalized and validated as “**Laptop Servicing and Maintenance, Level 3**”.

Chairman
 Committee on Standard and
 Curriculum Validation,
 Chairman - ICT ISC