COMPETENCY STANDARD

FOR

IT SUPPORT SERVICE

(ICT Sector)

Level: 03

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

National Skills Development Authority
Prime Minister's Office, Bangladesh

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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. "**IT Support Service**" is selected as one of the priority occupations of **Information and Communication Technology** 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 (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.

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

NSDA	National Skills Development Authority
BMET	Bureau of Manpower Employment and Training
ILO	International Labor Organization
ISC	Industry Skills Council
NSQF	National Skills Qualifications Framework
SCVC	Standards and Curriculum Validation Committee
SEIP	Skills for Employment Investment Program
STP	Skills Training Provider
UoC	Unit of Competency
GUI	Graphical User Interface
ESD	Electro-static discharge
IC	Integrated circuit
ICT	Information and Communication Technology
IT	Information technology
LCD	Liquid Crystal Display
OHS	Occupational health and safety
PPE	Personal protective equipment
RAM	Random Access Memory
USB	Universal serial bus
OS	Operating System
BIOS	Basic Input Output System
URL	Uniform Resource Locator
ISP	Internet Service Provider
CMOS	Complementary Metal-oxide Semiconductor
IDE	Integrated Drive Electronics
SATA	Serial Advanced Technology Attachment
PATA	Parallel Advanced Technology Attachment
HDD	Hard Disk Drives

SSD	Solid-state Drives
NVMe	Non-Volatile Memory Express
SOHO	Small Office Home Office
LAN	Local Area Network
WAN	Wide Area Network
NIC	Network Interface Card
MBR	Master Boot Record
GPT	GUID Partition Table

Approval of Competency Standard

Name and Designation	Signature
Dulal Krishna Saha Executive Chairman (Secretary) National Skills Development Authority	
Md. Nurul Amin Member (Registration & Certification) Joint Secretary National Skills Development Authority	
Quamrun Naher Siddiqua Member (Coordination & Assessment) Joint Secretary National Skills Development Authority	
Dr. Md. Ziauddin Member (Admin & Finance) Joint Secretary National Skills Development Authority	
Alif Rudaba Member (Planning & Skills Standard) Joint Secretary National Skills Development Authority	

Competency Standards for National Skill Certificate – 3 in IT Support Service in ICT Sector

Course Structure

SL	Unit Code and Title		UoC Level	Nominal Duration (Hours)
Generic Competencies				**15**
1.	GU05L2V1	Carry Out Workplace Interaction in English	3	15
Sector Specific Competencies				**40**
2.	SUICT02L2V1	Use Office Application Software	2	25
3.	SUICT03L2V1	Access Information Using Internet	2	15
Occupation Specific Competencies				**305**
4.	OUITSS01L3V1	Interpret IT Support Service Fundamentals	3	20
5.	OUITSS02L3V1	Perform PC Assembling	3	70
6.	OUITSS03L3V1	Install and Use Operating System and Optimize Utilities	3	60
7.	OUITSS04L3V1	Perform Basic Networking	3	50
8.	OUITSS05L3V1	Install and Configure Application and Utility Software	3	15
9.	OUITSS06L3V1	Perform Basic Data Backup and Recovery	3	60
10.	OUITSS07L3V1	Maintain and Troubleshoot Personal Computer	3	30
Total Nominal Learning Hours				**360**

Units & Elements at Glance

Generic Competencies

Code	Unit of Competency	Elements of Competency	Duration (Hours)
GU05L2V1	Carry out workplace interaction in English	1. Interpret workplace communication and etiquette 2. Read and understand workplace documents 3. Participate in workplace meetings and discussions 4. Practice professional ethics at workplace	15

Sector Specific Competencies

Code	**Unit of Competency**	1. **Elements of Competency**	**Duration (Hours)**
SUICT02L2V1	Use office application software	1. Operate computer 2. Use word processor to prepare/create documents 3. Use spreadsheet to create /prepare worksheets 4. Use presentation software to create / prepare presentation	25
SUICT03L2V1	Access information using internet	1. Access resources from internet 2. Use and manage electronic mail	15

Occupation Specific Competencies

Code	Unit of Competency	Elements of Competency	Duration (Hours)
OUITSS01L3V1	Interpret IT Support Services Fundamentals	1. Interpret concepts of IT support services 2. Interpret IT devices and infrastructure 3. Interpret problem solving method in IT system 4. Interpret customer support services in IT system	20
OUITSS02L3V1	Perform PC Assembling	1. Prepare for assemble 2. Disassemble hardware components 3. Assemble hardware components 4. Modify BIOS setting 5. Store and Clean tools and equipment	70
OUITSS03L3V1	Install and Use Operating System and Optimize Utilities	1. Prepare for installation of Operating System (OS) 2. Install operating system 3. Install required driver 4. Perform user management	60
OUITSS04L3V1	Perform Basic Networking	1. Interpret the concept of networking 2. Interpret the network layout 3. Connect devices to the existing network 4. Troubleshoot in existing network 5. Create documentation for maintenance	50
OUITSS05L3V1	Install and Configure Application and Utility Software	1. Prepare for installation and configuration 2. Install and configure application software 3. Install and configure utility software 4. Install and configure security software	15

OUITSS06L3V1	Perform Basic Backup and Recovery	1. Interpret backup and data recovery 2. Perform OS backup 3. Perform user data backup 4. Perform email backup 5. Perform backup recovery	60
OUITSS07L3V1	Maintain and Troubleshoot Personal Computer	1. Prepare for troubleshoot 2. Identify the problem 3. Identify the possible cause of fault 4. Fix the problem 5. Update document	30

Generic Competencies

Unit Code and Title	GU05L3V1: Carryout Workplace Interaction in English
Nominal Hours	**15 Hours**
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to carry out workplace interaction. It specifically includes – interpreting workplace communication and etiquette; reading and understand workplace documents; participating in workplace meetings and discussions; and practicing professional ethics at workplace.
Elements of Competency	**Performance Criteria** **Bold & Underlined** terms are elaborated in the range of variables.
1. Interpret workplace communication and etiquette	1.1 Workplace code of conducts are interpreted as per organizational guidelines 1.2 Appropriate lines of communication are maintained with supervisors and colleagues 1.3 Workplace interactions are conducted in a **courteous manner** to gather and convey information 1.4 Questions about routine **workplace procedures and matters** are asked and responded as required
2. Read and understand workplace documents	2.1 Workplace documents are interpreted as per standard 2.2 Assistance is taken to aid comprehension when required from peers / supervisors 2.3 Visual information / symbols / signage's are understood and followed 2.4 Specific and relevant information are accessed from **appropriate sources** 2.5 Appropriate medium is used to transfer information and ideas
3. Participate in workplace meetings and discussions	3.1 Team meetings are attended on time and followed meeting procedures and etiquette 3.2 Own opinions are expressed and listened to those of others without interruption 3.3 Inputs are provided consistent with the meeting purpose and interpreted and implemented meeting outcomes
4. Practice professional ethics at workplace	4.1 Responsibilities as a team member are demonstrated and kept promises and commitments made to others

	4.2 Tasks are performed in accordance with workplace procedures 4.3 Confidentiality is respected and maintained 4.4 Situations and actions considered inappropriate or which present a conflict of interest are avoided
Range of Variables	
Variable	**Range** (may include but not limited to):
1. Courteous Manner	1.1 Effective questioning 1.2 Active listening 1.3 Speaking skills
2. Workplace Procedures and Matters	2.1 Notes 2.2 Agenda 2.3 Simple reports such as progress and incident reports 2.4 Job sheets 2.5 Operational manuals 2.6 Brochures and promotional material 2.7 Visual and graphic materials 2.8 Standards 2.9 OSH information 2.10 Signs
3. Appropriate Sources	3.1 HR department 3.2 Managers 3.3 Supervisors
Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency	
1. Critical aspects of competency	Assessment required evidence that the candidate: 1.1 followed workplace code of conducts as per organizational guidelines 1.2 interpreted workplace documents as per standard 1.3 interpreted workplace instructions and symbols 1.4 interpreted and implemented meeting outcomes
2. Underpinning Knowledge	2.1 Workplace communication and etiquette 2.2 Workplace documents, signs and symbols 2.3 Meeting procedure and etiquette
3. Underpinning Skills	3.1 Demonstrating performance of workplace communication and etiquette 3.2 Following workplace instructions and symbol

	3.3 Following workplace code of conducts is as per organizational guidelines 3.4 Interpreting workplace documents as per standard 3.5 Interpreting and implementing meeting outcomes
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 Relevant tools, Equipment, software and facilities needed to perform the activities. 5.2 Required learning materials.
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 a training centre or in an actual or simulated work place after completion of the training module 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 NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.

Sector Specific Competencies

Unit Code and Title	**SUICT02L2V1: Use Office Application Software**
Nominal Hours	**25 hours**
Unit Descriptor	This unit covers the knowledge, skills and attitude required to use office application software. It specifically includes operating computer, using word processor to prepare/create documents, using word processor to prepare/create documents, using spread sheet packages to create /prepare worksheets, using presentation packages to create / prepare presentation
Elements of Competency	**Performance Criteria** **Bold and underlined** terms are elaborated in the range of variables
1. Operate computer	1.1 **Peripherals** are checked and connected with computer properly 1.2 Power cords / adapter are connected properly with computer and power outlets socket safely 1.3 Computer is switched on gently 1.4 PC **desktop / GUI settings** are arranged and customized as per requirement 1.5 Files and folders are Manipulated as per requirement
2. Use word processor to prepare/create documents	2.1 **Word processor** is selected and started 2.2 **Documents** are created as per requirement 2.3 **Contents** are entered 2.4 Documents are **formatted** 2.5 Paragraph and page settings are performed 2.6 Document is previewed and printed
3. Use spread sheet packages to create /prepare worksheets	3.1 **Spreadsheet applications** are selected and started 3.2 Worksheets are created as per requirement 3.3 Data are entered 3.4 **Functions** are used for calculating and editing logical operation 3.5 **Sheets** are formatted as per requirement 3.6 **Charts** are created 3.7 Charts/ Sheets are previewed and printed
4. Use presentation packages to create / prepare presentation	4.1 Appropriate **presentation applications** are selected and started 4.2 Presentation is created as per requirement 4.3 Image, Illustrations, text, table, symbols and media are entered as per requirements 4.4 Presentations are formatted and animated 4.5 Presentations are previewed and printed

Range of Variables	
Variable	**Range** (May include but not limited to:)
1. Peripherals	1.1 Monitor

	1.2 Keyboard 1.3 Mouse 1.4 Modem 1.5 Scanner 1.6 Printer
2. Desktop/GUI settings	2.1. Icons 2.2. Taskbar 2.3. Appearance 2.4. Resolutions
3. Word processor	3.1. MS Word processor 3.2. Open office word processor 3.3. Google docs 3.4. Libreoffice
4. Documents	4.1. Word documents 4.2. Standard CV / Bio-Data with different text & fonts, image and table. 4.3. Application / Official letter with proper paragraph and indenting, spacing, styles, Illustrations, Tables, Header & Footers and symbols. 4.4. Standard report / newspaper items with column, footnote and endnote, drop cap, indexing and page numbering.
5. Contents	5.1 Text 5.2 Table 5.3 Symbols 5.4 Header & Footer
6. Formatted.	6.1 Bold 6.2 Italic 6.3 Underline 6.4 Font size, colour, 6.5 Change case 6.6 Alignment and intend
7. Spread sheet applications	7.1 MS Excel 7.2 LibreOffice Calc 7.3 OpenOfficeOrg 7.4 Google sheet
8. Functions	8.1 Mathematics 8.2 Logical 8.3 Simple Statistical
9. Sheets	9.1 Salary sheet with sorting, filtering and chart 9.2 Mark/Grade /Tabulation sheets for simple result processing
10. Charts	10.1 Column 10.2 Pie 10.3 line 10.4 bar

11. Presentation applications	11.1 MS PowerPoint Presentation 11.2 Google Slides 11.3 Prezi 11.4 LibreOffice impress
Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the unit of competency.	
1. Critical aspects of competency	Assessment requires evidences that the candidate: 1.1 created, opened, copied files and folders 1.2 renamed, deleted and sorted 1.3 completed operating system installations 1.1 completed application software installations are as per standard 1.2 used functions for calculating and editing logical operation in spread sheet 1.3 entered image, illustrations, text, table, symbols and media into presentation slide and animation is shown as per requirements 1.4 configured appropriate printer settings 1.5 printed document
2. Underpinning knowledge	2.1 Desktop items 2.2 Type of Bangla keyboard layout 2.3 Different type of software and application packages 2.4 Use of word processor, spread sheet and presentation software 2.5 Type of printers 2.6 Type of charts, Impotence of chart 2.7 Different type of math and logical functions.
3. Underpinning skill	3.1 Starting computer 3.2 Running application software 3.3 Managing desktop item 3.4 Manipulating files and folders
4. Required attitude	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, sub-ordinates and seniors in workplace
5. Resource implication	5.1 Relevant tools, equipment, software and facilities needed to perform the activities 5.2 Required learning material
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 a training center or in an actual or simulated work place after completion of the training module

	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 NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.

Unit Code and Title	**SUICT03L2V1: Access Information using Internet**
Nominal Hours	**15 hours**
Unit Descriptor	This unit covers the knowledge, skills and attitude required to access information using internet. It specifically includes the tasks of accessing resources from internet, using and managing electronic mail.
Elements of Competency	**Performance Criteria** **Bold and Underlined** terms are elaborated in the range of variables.
1. Access resources from internet	1.1 Appropriate internet **browsers** are selected and installed. 1.2 Netiquette principles are interpreted 1.3 Netiquette principles are followed. 1.4 Web address / URL is written/selected in /from address bar as per requirement. 1.5 Information is accessed using **Search engine** 1.6 Video / Information are downloaded from / to web site/**social media.** 1.7 Video / Information are shared from / to web site/social media. 1.8 Video / Information are uploaded from / to web site/social media. 1.9 **Web based Services** are used as per requirement.
2. Use and manage electronic mail	2.1. **Email service** are interpreted 2.2. Email account is created 2.3. Document is attached and sent to different types of recipients 2.4. Email is read, forwarded, replied and deleted as per requirement 2.5. Custom email folders are created and **manipulation** is performed 2.6. Email message is printed
Range of Variables	
Variable	**Range** (May include but not limited to:)
1. Browsers	1.1 Mozilla Firefox 1.2 Google chrome 1.3 Microsoft edge 1.4 Opera
2. Search engines	2.1. Google 2.2. Yahoo 2.3. Pipilika

	2.4. Msn 2.5. Bing
3. Social media.	3.1 Facebook 3.2 Twitter 3.3 Pinterest 3.4 LinkedIn 3.5 YouTube 3.6 Quora
4. Web based services	4.1 Drive 4.2 Calendar 4.3 Google meet 4.4 Zoom 4.5 Team 4.6 Google docs 4.7 Google sheet 4.8 Google slide 4.9 Map 4.10 Translator
5. Email services	5.1 Free mail services –Gmail, Yahoo, Hotmail 5.2 Web mail services.
6. Manipulation	6.1 Delete 6.2 Copy 6.3 Move 6.4 Sort 6.5 Archive
Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	Assessment requires evidences that the candidate: 1.1 downloaded / uploaded video / Information from / to web site 1.2 prepared and attached documents and sent to different types of recipients
2. Underpinning knowledge	2.1. Internet 2.2. WWW 2.3. Web site 2.4. Web address 2.5. URL 2.6. Web browsers 2.7. Search engines 2.8. Information 2.9. Social media 2.10. Web based services

	2.11. Folder manipulation 2.12. Email services platform 2.12.1. Gmail 2.12.2. Yahoo 2.12.3. Hotmail 2.12.4. Webmail
3. Underpinning skill	3.1 Accessing and sharing resources from internet 3.2 Downloading /uploading file, documents and video from /to web sites 3.3 Sending and receiving mail through mail service
4. Required attitude	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, sub-ordinates and seniors in workplace
5. Resource implication	The following resources must be provided: 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 a training center or in an actual or simulated work place after completion of the training module 7.2 Assessment should be done by NSDA certified/ nominated assessor

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Occupation Specific Competencies

Unit Code and Title	**OUITSS01L3V1: Interpret IT Support Services Fundamentals**
Nominal Hours	**20 Hours**
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to interpret IT support service fundamentals. It specifically includes the tasks of interpreting concepts of IT support services, IT devices and infrastructure, problem solving method IT system and customer support services in IT system
Elements of Competency	**Performance Criteria** **Bold and Underlined** terms are elaborated in the range of variables
1. Interpret concepts of IT support services	1.1 Information Technology is defined 1.2 IT support is defined 1.3 Career path of IT Support specialist is identified 1.4 Computer architecture overview is interpreted 1.5 Working Area of IT support service is determined
2. Interpret IT devices and infrastructure	2.1. Types of IT support services identified 2.2. Units of data is identified 2.3. **IT devices** are interpreted 2.4. **IT infrastructure** is stated 2.5. **End User support** is defined 2.6. Surveillance and security system is defined
3. Interpret problem solving method in IT system	3.1 IT system problems are identified and defined 3.2 Solutions of identified problem are determined 3.3 Alternative solutions are determined 3.4 Solutions are evaluated 3.5 Solution is implemented and follow-up on the solutions is performed
4. Interpret customer support services in IT system	4.1 Customer support services is interpreted 4.2 Customer point of view is determined 4.3 Customer issues is identified 4.4 Solution is found 4.5 Solutions/ services is delivered
Range of Variables	
Variables	**Range** (may include but not limited to):
1. IT Devices	1.1 Computer, all accessories, all peripherals 1.2 Networking device

	1.3 Communication devices 1.4 Surveillance and Security System
2. IT infrastructure	2.1 Software development company 2.2 Data center, ISP 2.3 Call center help desk service 2.4 Cloud service and cyber security 2.5 Hardware support center 2.6 Data backup and recovery center
3. End user support	3.1 Hardware support 3.2 Software support 3.3 Network support
Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency	
1. Critical aspects of competency	Assessment required evidence that the candidate: 1.1 interpreted concepts of IT support service 1.2 interpreted IT device and infrastructure 1.3 interpreted problem solving method in IT system 1.4 interpreted customer support service in IT system
2. Underpinning knowledge	2.1 Information Technology 2.2 Career path of IT Support specialist 2.3 Working area of IT support service 2.4 IT devices 2.5 IT infrastructure 2.6 End user support 2.7 IT system problems 2.8 Customer support services 2.9 Customer issues
3. Underpinning Skills	3.1 Determining working area of IT support service 3.2 Identified IT devices 3.3 Evaluating end user support solutions 3.4 Implementing solution and performing follow-up on the solutions 3.5 Identifying customer issues 3.6 Delivering solutions/ services
4. Required attitude	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 Implication	The following resources must be provided: 5.1 Relevant tools, equipment, software and facilities needed to perform the activities. 5.2 Required learning materials.
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 a training center or in an actual or simulated workplace after completion of the training module 7.2 Assessment should be done by NSDA certified/ nominated assessor

Accreditation Requirements

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Unit Code and Title	**OUITSS02L3V1: Perform PC Assembling**
Nominal Hours	**70 Hours**
Unit Descriptor	This unit covers the knowledge, skills and attitude required to perform PC assembling. It specifically includes the tasks of preparing for assemble, disassembling hardware components, assembling hardware components and modifying BIOS setting
Elements of Competency	**Performance Criteria** **Bold and Underlines** terms are elaborated in the range of variables
1. Prepare for assemble	1.1 **PPE** is used and safe work practice is followed 1.2 PC equipment is Isolated from electrical source when assembling 1.3 Electrostatic discharge precautions are observed at all times 1.4 Safe work practice observed and personal protective equipment (PPE) worn as required for the work performed 1.5 **Tools and equipment** are selected as required
2. Disassemble hardware components	2.1. PC are collected for disassemble 2.2. Tools are collected as required 2.3. PC is disassembled 2.4. **Components** of user PC are identified and documented
3. Assemble hardware components	3.1. Components of PC are collected 3.2. Tools are collected for assemble as required 3.3. Components of PC are assembled 3.4. Pc is connected with the power source 3.5. Performance of the PC is checked
4. Modify BIOS setting	4.1. Date and time are adjusted 4.2. Correct processor and memory clock frequency is chosen 4.3. **Storage device** and optical drive interface is selected correctly 4.4. **System information** is checked and verified from BIOS
5. Store and clean tools and equipment	5.1 Tools and equipment are cleaned and stored as per workplace standard 5.2 Workplace is cleaned
Range of Variables	
Variable	**Range** (May include but not limited to)
1. PPE	1.1 Apron

	1.2 Hand gloves 1.3 Rubber shoe 1.4 Anti-static mat 1.5 Anti-static wrist band
2. Tools and Equipment	2.1. PC Assemblers Tool box 2.2. ESD tools 2.3. AVO meter 2.4. Power extension cord with multiple power socket 2.5. Blower gun 2.6. Hand brash
3. Components	3.1. Mainboard 3.2. Processor 3.3. RAM 3.4. CMOS Battery 3.5. Graphics Card 3.6. Storage device (IDE, SATA, PATA, SSD, M.2, NVMe) 3.7. Sound card 3.8. Network interface card 3.9. Internal and external modem 3.10. Power supply 3.11. Computer Case
4. Storage Device	4.1 Hard Disk Drives (HDD) 4.2 Solid-State Drives (SSD) 4.3 Non-Volatile Memory Express (NVMe)
5. System information	5.1 RAM 5.2 Processor 5.3 CPU fan 5.4 Mainboard 5.5 Storage device 5.6 Display 5.7 Supply voltage 5.8 USB Storage
Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the unit of competency.	
1. Critical aspects of competency	Assessment required evidence that the candidate: 1.1 observed safe work practice 1.2 performed personal protective equipment (PPE) worn as required for the work 1.3 selected and collected proper hardware as per requirement 1.4 checked and rectified connections of all required devices as required before connecting to power source

2. Underpinning knowledge	2.1. Basic knowledge of personal computer and its components 2.2. Operating System basic 2.3. Operating system licensing system (propitiatory) 2.4. Copyright ACT 2005 National IT Policy and their subsequent amendments. 2.5. Electrical and Electronic Safe working in practice 2.6. Basic knowledge on motherboard, motherboard components and other PC components and their functions and relationship 2.7. Basic knowledge on electrical connections, power supply, power cables, storage devices 2.8. Functions of BIOS and its configuration 2.9. Basic knowledge of operation system, functions and operating system installation steps
3. Underpinning skill	3.1. Making proper motherboard and motherboard components selection according to customer requirements 3.2. Making proper selection of power supply, power cord, storage devices, keyboard, mouse, case and monitor 3.3. Assembling motherboard and other PC components 3.4. Connecting keyboard, mouse, monitor and power cord to wall power socket 3.5. Updating BIOS configuration 3.6. installing operating system 3.7. Handling electrical and mechanical equipment safely to avoid electrical and mechanical hazards 3.8. Following instruction manuals when assembling
4. Required attitude	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, sub-ordinates and seniors in workplace
5. Resource implication	Following resources must be provided- 5.1 Relevant Tools, Equipment and physical facilities required to perform activities 5.2 Materials and consumables are related to the activities 5.3 Relevant drawings, manuals, charts and diagrams
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 a training center or in an actual or simulated work place after completion of the training module
	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 NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.

Unit Code and Title	**OUITSS03L3V1: Install and Use Operating System and Optimize Utilities**
Nominal Hours	**60 Hours**
Unit Descriptor	This unit covers the knowledge, skills and attitude required to install and use operating system and optimize utilities. It includes the tasks of preparing for installation of OS, installing operating system, performing user management and installing required driver.
Elements of Competency	**Performance Criteria** **Bold and Underlined** terms are elaborated in the range of variables
1. Prepare for installation of Operating System (OS)	1.1 Operating system is selected as per requirement 1.2 Unified Extensible Firmware Interface (UEFI) and legacy mode is identified 1.3 **Partition type** is selected as per partition requirement 1.4 **Boot Media** is selected and prepared for installation 1.5 Boot sequence is modified as per requirement
2. Install operating system	2.1. OS installation is started 2.2. OS version is selected as per requirement 2.3. Disk is partitioned and formatted as per user requirement. 2.4. Operating system installation steps are followed according to the OS setup instruction. 2.5. Operating system is configured and optimized according to the workplace requirement.
3. Install required driver	4.1. Required driver is identified 3.1. **Source** is selected for driver as requirement 3.2. Driver is installed as per **component** requirement
4. Perform user management	3.3. Users are created as per requirement 3.4. Password is set as required 3.5. Access privilege is set for user accounts

Range of Variables	
Variable	**Range** (May include but not limited to)
1. Partition type	1.1 GPT 1.2 MBR
2. Boot media	2.1. Optical disk 2.2. USB boot disk
3. Source	3.1 Vendor site 3.2 Driver disk 3.3 Driver agent

4. Component	4.1 Motherboard 4.2 Interface card 4.3 Graphics 4.4 Sound 4.5 Wireless/ Ethernet 4.6 Memory and storage
Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the unit of competency.	
1. Critical aspects of competency	Assessment required evidences that the candidate: 1.1 prepared OS installation 1.2 installed operating system 1.3 performed user management 1.4 installed required driver
2. Underpinning knowledge	2.1. Basic knowledge of personal computer and its components 2.2. Operating system basic 2.3. Operating system components and functionality of the components. 2.4. Types of operating system 2.5. OS Versions 2.6. Motherboard component 2.7. Boot media (Optical disk, USB boot disk, PXE ROM) 2.8. Software licensing system (propitiatory) 2.9. Copyright ACT 2005 National IT Policy and their subsequent amendments. 2.10. Software and hardware installation and upgrade 2.11. Basic knowledge on computer assembling 2.12. Basic knowledge on interaction of computer hardware and software 2.13. Electrical and electronic safe work practices
3. Underpinning skills	3.1. Understanding user requirements correctly 3.2. Performing proper selection of software and hardware components 3.3. Installing hardware and/or software components 3.4. Evaluating correct installation and functioning of the installed component 3.5. Keeping clean and orderly workplace and equipment 3.6. Trashing damaged hardware components properly, follow environmental safety act 3.7. Following steps to install/upgrade hardware and/or software components in the manual
4. Required attitude	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, sub-ordinates and seniors in workplace
5. Resource implication	The following resources must be provided: 5.1 Relevant tools, equipment and physical facilities required to perform activities 5.2 Materials and consumables are related to the activities 5.3 Relevant manuals
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 a training center or in an actual or simulated work place after completion of the training module 7.2 Assessment should be done by NSDA certified/ nominated assessor

Accreditation Requirements

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Unit Code and Title	**OUITSS04L3V1: Perform Basic Networking**
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to perform networking. It includes interpreting the concept of networking, interpreting the network layout, connecting devices to the existing network, troubleshooting in existing network, creating documentation for maintenance.
Nominal Hours	**50 Hours**
Elements of Competency	**Performance Criteria** **Bold & italicized** terms are elaborated in the Range of Variables
1. Interpret the concept of networking	1.1 Network is defined 1.2 Types of networks is interpreted 1.3 IP properties is interpreted 1.4 Network connectivity tools identified 1.5 Transmission media determined.
2. Interpret the network layout	2.1 Organizational requirements are collected and documented to setup an existing **network.** 2.2 Network layout is collected 2.3 Existing network topology and network protocol is identified and documented 2.4 Network design plan is interpreted. 2.5 IP Addressing scheme is interpreted
3. Connect devices to the existing network	3.1 Required **transmission media**, **tools and equipment** are selected and collected. 3.2 Cabling is performed as per layout 3.3 Connections is established as per layout design. 3.4 Device is connected with the existing network with appropriate transmission media infrastructure 3.5 **IP properties** is assigned and connectivity is tested as per work plan.
4. Troubleshoot in existing network	4.1 Network design, support and maintenance documents are reviewed. 4.2 Appropriate person is consulted for identifying problems if required. 4.3 Faulty hardware or software component are detected. 4.4 **Solution** of **Problem** is performed. 4.5 Network functionality is tested. 4.6 Maintenance and troubleshooting documents are updated. 4.7 Tools and equipment are stored as per workplace procedures.

5. Create documentation for maintenance	5.1 All the settings are documented 5.2 Configuration and PC network IP address are documented for future maintenance purpose
Range of Variables	
Variables	**Range** (may include but not limited to):
1. Network	1.1 Small Office Home Office [SOHO] 1.2 LAN 1.3 WAN
2. Transmission media	2.1 Wired 2.2 Wireless
3. Tools and equipment	3.1 Crimping tool 3.2 Connector 3.3 Boot cap 3.4 Face plate modular 3.5 Punching tool 3.6 Screw driver set 3.7 Cable tester 3.8 Cable cutter 3.9 Patch cord 3.10 Cable Tag 3.11 Cable tie
4. IP properties	4.1 IP address 4.2 Subnetmask 4.3 Gateway 4.4 DNS
5. Solution	5.1 Solve problem 5.2 Repair components 5.3 Replace components
6. Problems	6.1 Connection drop 6.2 Cable and connector problem 6.3 IP conflict 6.4 DNS problem 6.5 File or printer sharing problem 6.6 Packet loss/ slow performance 6.7 Wireless channel issue
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 evidences that the candidate: 1.1 monitored and documented networks 1.2 assigned address is to client machine (automatically or statically. e.g.; assign IP address, sub netmask statically in the case of TCP/IP protocol) 1.3 assessed conflict of Network Interface Card (NIC) 1.4 disabled and enabled NIC 1.5 configured PC internet firewall to protect PC from unwanted packet
2. Underpinning knowledge	2.1 procedure of assign address to client machine (automatically or statically. e.g.; assign IP address, sub netmask statically in the case of TCP / IP protocol). 2.2 Organizational requirements to set-up a new network. 2.3 Network topology and network protocol. 2.4 Documentation process for network address plan. 2.5 Domain name assigning process if required. 2.6 Host name assigning procedure. 2.7 Settings, computation and PC network address documentation for future maintenance purpose. 2.8 Procedure of connectivity with intranet, internet, extranet. 2.9 IPv4 and IPv6 2.10 Number system (Binary, Hexadecimal) 2.11 Subnetting 2.12 OSI and TCP IP model
3. Underpinning skills	3.1 Analyzing collected information and devising network design plan. 3.2 Listing of required equipment and tools and calculating and documenting estimated budget. 3.3 Connecting appropriate transmission media pc with the existing network. 3.4 Assigning address to client's unit (automatically or statically. e.g.; assign IP address, sub netmask statically in the case of TCP/IP protocol). 3.5 Disabling and enabling NIC. 3.6 Configuring PC internet firewall to protect PC from unwanted packet.

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. 4.5 Tidiness and timeliness. 4.6 Environmental concerns. 4.7 Respect for rights of peers and seniors at workplace. 4.8 Communication with peers and seniors at workplace.
5. Resource implications	The following resources must be provided: 5.1 Workplace (actual or simulated) 5.2 Computer / Laptop / Notebook 5.3 Internet 5.4 Projector 5.5 Learning manual
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 a training center or in an actual or simulated work place after completion of the training module 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 NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.

Unit Code and Title	**OUITSS05L3V1: Install and Configure Application and Utility Software**
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to install and configure application and utility software. It specifically includes the tasks of preparing for installation and configuration, installing and configuring application software, utility software and security software.
Nominal Hours	**15 Hours**
Elements of Competency	**Performance Criteria** **Bold & Underlined** terms are elaborated in the range of variables
1. Prepare for installation and configuration	1.1 Occupational Safety and Health (OSH) procedures are followed 1.2 User requirements are documented 1.3 **Application software** and **utility software** are collected as per user requirement. 1.4 Necessary backup is taken if required
2. Install and configure application software	2.1 Application software are selected and collected according to the user requirement 2.2 Application software are installed 2.3 Application software is configured as per requirement 2.4 Software license is activated if required 2.5 Functionality of installed application software is checked
3. Install and configure utility software	3.1 Utility software are selected and collected according to the user requirement. 3.2 Utility software are installed 3.3 Utility software is configured as per requirement 3.4 Functionality of installed utility software is checked
4. Install and configure security software	4.1 Required Security software is identified and selected 4.2 Security software are stored in local drive 4.3 Security software are installed 4.4 Security software is configured as per requirement 4.5 Functionality of installed security software is checked
Range of Variables	
Variables	**Range** (may include but not limited to):
1. Application software	1.1 Open Office. 1.2 MS Office 1.3 Bangla typing software 1.4 Internet Browser

2. Utility software	2.1 PDF Reader 2.2 Anti-virus 2.3 Compress/ decompress software (Winzip/ winrar)
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 evidences that the candidate: 1.1 prepared for installation and configuration 1.2 installed and configured application software 1.3 installed and configured utility software 1.4 installed and configured security software
2. Underpinning knowledge	2.1 Procedure of configure software. 2.2 Software installation process 2.3 Software Activation process 2.4 Types of operating system and identification techniques. 2.5 Procedure of uninstallation and configure of utility software. 2.6 Types of operating system are identified.
3. Underpinning skills	3.1 Collecting PC software components and storing according to user manual or guidelines. 3.2 Installing required device driver. 3.3 Installing / updating software component. 3.4 Doing hard disk partition correctly. 3.5 Installing required device driver. 3.6 Installing operating system. 3.7 Upgrading the software component if the older version is already installed. 3.8 Configuring and optimizing the operating system and its components according to the workplace requirement. 3.9 Installing and configuring the utility software.
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 Environmental concerns. 4.5 Eagerness to learn. 4.6 Tidiness and timeliness. 4.7 Respect for rights of peers and seniors at workplace. 4.8 Communication with peers and seniors at workplace.

5. Resource implications	The following resources must be provided: 5.1 Workplace (actual or simulated) 5.2 Computer / laptop / notebook with internet connection 5.3 Software 5.4 Stationary and learning manual.
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 a training center or in an actual or simulated work place after completion of the training module 7.2 Assessment should be done by NSDA certified/ nominated assessor

Accreditation Requirements

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Unit Code and Title	OUITSS06L3V1: Perform Basic Data Backup and Recovery
Nominal Hours	**60 hours**
Unit Descriptor	This unit covers the knowledge, skills and attitude required to perform basic backup and recovery. It specifically includes the tasks of interpreting backup and data recovery, performing OS backup, user data backup, Email backup and backup recovery
Elements of Competency	**Performance Criteria** **Bold and underlined** terms are elaborated in the range of variables
1. Interpret backup and data recovery	1.1 Backup is interpreted 1.2 Data recovery is interpreted 1.3 Type of backup solutions are stated 1.4 Disaster recovery plan is interpreted
2. Perform OS Backup	2.1 **Partition table** is interpreted 2.2 Backup Plan is prepared 2.3 **Tools for OS backup** is identified and collected 2.4 **Target** for backup is identified 2.5 **Backup procedure** is performed
3. Perform user data backup	3.1 Backup Plan is prepared 3.2 Tools for user data backup is identified and collected 3.3 Target for backup is identified 3.4 Backup procedure is performed
4. Perform email backup	4.1 **Mail client** is identified and configured. 4.2 Local Database file of mail client is identified 4.3 **Email Backup Plan** is prepared 4.4 Target for backup is identified 4.5 Backup procedure is performed
5. Perform backup recovery	5.1 Backup is collected for recovery 5.2 Tools are identified and selected for recovery. 5.3 Recovery target is identified 5.4 Restore point is identified 5.5 Restore procedure is performed
Range of Variables	
Variable	**Range** (May include but not limited to)
1. Partition table	1.1 MBR 1.2 GPT
2. Tools for OS backup	2.1 System provided tool 2.2 Third Party 2.2.1 Norton 2.2.2 Acronis 2.2.3 EASE US 2.2.4 AOMEI

	2.2.5 Minitool
3. Target	3.1 Cloud (OneDrive, Google Drive) 3.2 Local Storage (External Storage Devices, Network storage)
4. Backup procedure	4.1. Manual 4.2. Scheduled 4.3. Scheme (Full, incremental, Differential)
5. Mail client	5.1. Outlook (Windows) 5.2. Thunder Bird (Linux)
6. Email Backup Plan	6.1 Import/Export 6.2 Manual
Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	The assessment required evidence that the candidate: 1.1 interpreted Backup and Data recovery 1.2 performed OS Backup 1.3 performed user data backup 1.4 performed email backup 1.5 performed backup recovery
2. Underpinning knowledge	2.1 OS backup 2.2 User data backup 2.3 Email backup 2.4 Recovery planning 2.5 Disaster recovery 2.6 Data recovery 2.7 Backup solutions 2.8 Backup testing 2.9 OS architecture (Windows, Linux) 2.10 Backup storage media
3. Underpinning skill	3.1 Preparing backup Plan 3.2 Performing backup procedure 3.3 Performing email backup 3.4 Performing backup recovery
4. Required attitude	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, sub-ordinates and seniors in workplace
5. Resource implication	Following resources must be provided-

	5.1 Relevant tools, equipment and physical facilities required to perform activities 5.2 Materials and consumables are related to the activities 5.3 Relevant drawings, manuals, charts and diagrams
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 a training center or in an actual or simulated work place after completion of the training module 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 NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.	

Unit Code and Title	**OUITSS007L3V1: Maintain and Troubleshoot Personal Computer**
Nominal Hours	**30 hours**
Unit Descriptor	This unit covers the knowledge, skills and attitude required to maintain and troubleshoot personal computer. It includes preparing for troubleshooting, identifying the problem, identifying the possible cause of fault, fixing the problem and updating document.
Elements of Competency	**Performance Criteria** **Bold and underlined** terms are elaborated in the range of variables
1. Prepare for Troubleshoot	1.1 Required tools and equipment's are selected and collected for troubleshooting 1.2 Appropriate person is interviewed about the problem
2. Identify the problem	2.1. Computer manuals and maintenance documents are reviewed 2.2. Problems are detected through physical observation 2.3. Problems are detected using diagnostic tools 2.4. Identified problems are documented
3. Identify the possible cause of fault	3.1. Appropriate person (if required) is consulted 3.2. Cause of fault is identified 3.3. Testing is performed to ensure the cause of fault 3.4. **Repair** or **Replacement** cost is calculated and approved from the **appropriate person**
4. Fix the problem	4.1. Faulty hardware equipment or software component is repaired or replaced 4.2. Repaired/replaced equipment is tested 4.3. Performance of PC is tested
5. Update document	5.1 Computer maintenance and troubleshooting status are documented 5.2 Documented status is reported to the authority
Range of Variables	
Variable	**Range** (May include but not limited to)
1. Repair	2.1 Blue screen problem 2.2 Frozen screen problem 2.3 Boot device problem 2.4 Connection problem 2.5 Update software
2. Replacement	3.1. Hardware component 3.2. Software component 3.3. Mother board components
3. Appropriate person	4.1 Person responsible for network 4.2 Management of the organization

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	The assessment required evidence that the candidate: 1.1 observed safe work practice and personal protective equipment (PPE) worn as required for the work performed 1.2 verified properly installed hardware and driver. 1.3 verified existing network environment
2. Underpinning knowledge	2.1 Tools and equipment's for troubleshooting 2.2 Computer problems 2.3 Cause of fault 2.4 Types of fault 2.5 Faulty hardware
3. Underpinning skill	3.1 Repairing or replacing faulty hardware equipment or software component 3.2 Using diagnostic tools the fault needs to be identified
4. Required attitude	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, sub-ordinates and seniors in workplace
5. Resource implication	5.1 Relevant Tools 5.2 Equipment and physical facilities required to perform activities relevant user manuals
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 a training center or in an actual or simulated work place after completion of the training module 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	

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Development of Competency Standard

The Competency Standards for National Skills Certificate in IT support service, Level-3 is developed by NSDA on 25 – 27 and 30 January 2022.

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Validation of Competency Standard by Standard and Curriculum Validation Committee (SCVC)

The Competency Standards for National Skills Certificate in **IT support services, Level-3** is validated by NSDA on 21 - 22 March 2022.

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This Competency Standard for **IT Support Service** 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.

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