DIGITAL LITERACY

ISCED UNIT CODE: 0611 451 01A

TVETCDACC UNIT CODE: ENV/CU/ENT/BC/01/5/MA

DURATION OF UNIT: 40 HOURS

Relationship to Occupational Standards

This unit addresses the unit of competency: **Digital Literacy**

Unit Description

This unit covers the competencies required to demonstrate digital literacy. It involves operating computer devices, solving tasks using the Office suite, accessing online/offline data and information, performing online communication and collaboration, applying cybersecurity skills and performing jobs online. It also involves applying job entry techniques.

Summary of Learning Outcomes

By the end of this unit, the learner should be able to:

S/No	Learning Outcomes	Duration (Hours)
1.	Operate computer devices	6
2.	Solve task using office suite	14
3.	Manage data and information	6
4.	Apply cyber security skills	4
5.	Online collaboration and communication	4
6.	Perform online jobs	4
7.	Apply job entry techniques	2
Total		**40**

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcomes	Content	Suggested Assessment Methods

1. Operate computer devices	**Theory**
	1.1 Computer devices
	  1.1.1 Definition of terms
	    1.1.1.1 Digital literacy
	    1.1.1.2 Computer systems
	    1.1.1.3 Information communication technology (ICT)
	  1.1.2 Importance of Information and Communication Technology
	  1.1.3 Functions and uses of computers
	  1.1.4 History of computers
	  1.1.5 Classifications of computers
	  1.1.6 Components of computer system
	  1.1.7 Computer Hardware
	    1.1.7.1 System unit
	    1.1.7.2 Input devices
	    1.1.7.3 Output devices
	    1.1.7.4 Storage Devices
	    1.1.7.5 Computer ports
	  1.1.8 Computer software
	    1.1.8.1 Classifications of computer software.
	    1.1.8.2 Operating system functions
	  1.1.9 Booting a computer
	  1.1.10 Mouse use techniques
	  1.1.11 Keyboard parts and uses techniques
	  1.1.12 Desktop customization
	  1.1.13 Files and folders management using operating system
	  1.1.14 Computer internet connection
	    1.1.14.1 Mobile networks/data plans
		• Written assessment
		• Practical assessment
		• Interviews/ Oral questions

	1.1.14.2 Wireless hotspots	
	1.1.14.3 Cabled (Ethernet/fibre)	
	1.1.14.4 Dial-Up	
	1.1.14.5 Satellite	
	1.1.15 Computer external devices	
	1.1.15.1 Device connections	
	1.1.15.2 Device controls (volume controls and Display properties)	
	Practice	
	1.2 Identify, assemble and connect the computer components listed in 1.1.7.	
	1.1.16 Computer hardware	
	1.1.16.1 System unit	
	1.1.16.2 Input devices	
	1.1.16.3 Output devices	
	1.1.16.4 Storage devices	
	1.1.17 Boot a computer according to booting standards/procedures	
	1.1.18 Customize desktop	
	1.1.19 Manage files and folders	

2. Solve tasks using office suite	2.1 Microsoft Office Suite
	
	2.1.1 Word processing concepts
	    2.1.1.1 Examples of Word processing
	    2.1.1.2 Importance of Word processing
	2.1.2 Working with word documents
	    2.1.2.1 Opening and closing word processor Create a new document
	    2.1.2.2 Save a document
	    2.1.2.3 Switch between open documents
	2.1.3 Microsoft word screen layout
	    2.1.3.1 Set basic options/preferences
	    2.1.3.2 Help resources
		• Written assessment
		• Practical assessment
		• Oral assessment
		• Project

2.1.3.3 Use of magnification/zoom tools

2.1.3.4 Display, hide built in tool bar

2.1.3.5 Using navigation tools

2.1.4 Creating word document

2.1.4.1 Editing a document

2.1.4.2 Formatting a document

2.1.4.3 Formatting text

2.1.4.4 Formatting paragraphs

2.1.4.5 Formatting page/document

2.1.5 Creating and editing tables

2.1.5.1 Editing of tables

2.1.6 Formatting tables

2.1.6.1 Border and shadings

2.1.6.2 Adjusting column width and row heights

2.1.6.3 Changing text direction

2.1.7 Inserting graphical objects

2.1.7.1 Edit and format an object

2.1.8 Mail merging

2.1.9 Document print set up

2.1.9.1 Print preview

2.1.9.2 Page layout

2.1.9.3 Paper size

2.1.9.4 Orientation

2.1.10 Printing a document

2.2 Spreadsheets concepts

2.2.1 Electronic spreadsheets

2.2.2 Importance of electronic spreadsheets

2.2.3 Components of spreadsheets

2.2.4 Applications areas of spreadsheets

2.2.5 Creating worksheets using Microsoft Excel

2.2.5.1 Parts of MS Excel Window

	2.2.5.2 Cell data types	
	2.2.5.3 Cell referencing	
	2.2.5.4 Block operations	
	2.2.5.5 Arithmetic operators	
	2.2.6 Data manipulation	
	2.2.6.1 Basic functions and formulae	
	2.2.6.2 Database functionalities	
	2.2.6.2.1 Sorting data	
	2.2.6.2.2 Filtering data	
	2.2.6.2.3 Sub-totals	
	2.2.7 Editing a worksheet	
	2.2.8 Formatting a worksheet	
	2.2.9 Visual representation using charts	
	2.2.10 Worksheet printing	
	2.3 Electronic presentations	
	2.3.1 Meaning and importance of electronic presentations	
	2.3.2 Examples of an electronic presentations	
	2.3.3 Application areas of electronic presentation.	
	2.3.4 Creating presentations using Microsoft PowerPoint	
	2.3.4.1 Parts of MS PowerPoint Window	
	2.3.4.2 Open and close presentation	
	2.3.4.3 Creating slides	
	2.3.4.4 Text management	
	2.3.4.5 Use of magnification tools	
	2.3.4.6 Switch between open presentations	
	2.3.5 Developing a presentation	
	2.3.5.1 Presentation views	
	2.3.5.2 Slides	
	2.3.5.3 Master slide	
	2.3.6 Text	

2.3.6.1 Editing text

2.3.6.2 Formatting text

2.3.7   Charts

2.3.7.1 Using charts

2.3.7.2 Organizational charts

2.3.8   Graphical objects

2.3.8.1 Insert, and manipulate object

2.3.8.2 Insert tables

2.3.8.3 Draw an object

2.3.9   Outputs preparation

2.3.9.1 Apply slides effects and transitions

2.3.9.2 Check and deliver

2.3.9.3 Spell check a presentation

2.3.9.4 Slide orientation

2.3.9.5 Slide shows navigation

2.3.10 Print presentations (slides and handouts)

Practice

2.4 Create Word document,

2.4.1   Insert header and footer

2.4.2   Apply document editing techniques

2.4.3   Apply formatting tools

2.4.4   Format page

2.4.5   Insert tables, graphical objects and charts.

2.4.6   Save the changes to be printed out later.

2.5 Create a workbook in Microsoft Excel

2.5.1   Use basic formulae and functions to perform calculations

2.5.2   Use editing tools such as deleting entries, insert row and columns, copying, moving, finding, replace and spell checking

	2.5.3 Format the worksheet	
	2.5.4 Generate charts	
	2.5.5 Save and print Workbook	
	2.6 Create PowerPoint presentation slides	
	2.6.1 Edit and format texts and paragraphs	
	2.6.2 Insert objects, images, shapes and charts	
	2.6.3 Apply predefined PowerPoint theme	
	2.6.4 Add slide animations and transition effects	
	2.6.5 Deliver presentations	

3. Manage data and information	**Theory**
	3.1 Data and Information
	  3.1.1 Definition of terms
	  3.1.2 Importance and uses of data and information
	  3.1.3 Computer networks
	    3.1.3.1 Meaning and types of computer networks
	  3.1.4 Meaning of internet
	    3.1.4.1 Internet connectivity requirements
	    3.1.4.2 Internet Service Providers
	  3.1.5 Types of internet services
	    3.1.5.1 Communication services
	    3.1.5.2 Information services
	    3.1.5.3 File transfer
	    3.1.5.4 Worldwide webs services
	    3.1.5.5 E –commerce
	    3.1.5.6 Newsgroup
	  3.1.6 Types Internet access applications
	    3.1.6.1 Email Client
	    3.1.6.2 Web browser
	    3.1.6.3 Internet of things
	    3.1.6.4 Internet Protocol
		• Written assessment
		• Oral assessment
		• Practical assessment

		3.1.7 Web browsing concepts 3.1.7.1 Key concepts 3.1.7.2 Security and safety 3.1.8 Web browsing 3.1.8.1 Using web browser 3.1.8.2 Tools and settings 3.1.8.3 Clearing cache and cookies 3.1.8.4 Uniform Resource Locator 3.1.8.5 Bookmarks 3.1.8.6 Web outputs 3.1.9 Web based search 3.1.9.1 Search 3.1.9.2 Critical evaluation of information 3.1.9.3 Copyright, data protection 3.1.10 Downloads Management 3.1.11 Performing Digital Data 3.1.12 Backup (Online and Offline) 3.1.13 Emerging issues in internet **Practice** 3.2 Establish an internet connection 3.2.1 Open a web browser application allow/block cookie 3.2.2 Add bookmarks/ favourites 3.2.3 Download files to a location 3.2.4 Copy URLs from a web page to another 3.3 Use search engine to find information	
4	Perform online communication and collaboration	**Theory** 4.1 Communication and collaboration 4.1.1 Netiquette principles 4.1.2 Communication concepts 4.1.1.1 Online communities 4.1.1.2 Communication tools 4.1.2 Email concepts	

	4.1.2.1 importance of effective email	
	4.1.2.2 email types and their purposes (personal, professional)	
	4.1.3 Electronic Mail	
	4.1.3.1 Sending E-mail	
	4.1.3.2 Receiving E-mail	
	4.1.3.3 Tools and settings	
	4.1.3.4 Organizing E-mail	
	4.1.4 Digital content copyright and licenses	
	4.1.5 Online collaboration tools	
	4.1.5.1 Benefits and challenges of online collaboration tools	
	4.1.5.2 Online storage and productivity	
	4.1.5.2.1 Google Drive	
	4.1.5.2.2 Dropbox	
	4.1.5.2.3 iCloud Drive	
	4.1.5.3 Online meetings	
	4.1.5.4 Online learning environment	
	4.1.5.5 Online calendars (google calendars)	
	4.1.5.6 Social networks (Facebook/Twitter/setting)	
	4.1.6 Preparation for online collaboration	
	4.1.6.1 Common set up feature	
	4.1.6.2 set up	
	4.1.7 Mobile collaboration	
	4.1.7.1 Key concepts	
	4.1.7.2 Mobile devices	
	3.3 4.1.7.2 Key types of Mobile Devices	
	4.1.7.3 Applications	

	4.1.7.4 Synchronization 4.1.7.4.1 key aspects of synchronization **Practice** 4.2 Participate in online communities 4.3 Download software to support online collaboration tools 4.4 Upload, download, delete online files/folders 4.5 Create and send an E-mail 4.6 Set up an online meeting, share the agenda, and follow up afterward. 4.7 Share files in an online meeting 4.8 Install an application on a mobile device 4.9 Synchronize mobile devices with mail, calendar, other devices	

5. Apply cybersecurity skills	**Theory**
	
	5.1 Data protection and privacy
	
	  5.1.1 Introduction to cybersecurity
	
	  5.1.2 Data security core principles
	
	     5.1.2.1 Data confidentiality
	
	     5.1.2.2 data integrity
	
	     5.1.2.3 data availability
	
	  5.1.3 Internet security threats
	
	     5.1.3.1 malware attacks
	
	     5.1.3.2 phishing and social engineering
	
	     5.1.3.3 distributed and denial of service
	
	     5.1.3.4 password attacks
	
	     5.1.3.5 Man-in –the –Middle attack (MitM)
	
	     5.1.3.6 Cloud and Internet of Things attacks
	
	  5.1.4 Computer threats and crimes
	
	     5.1.4.1 Environmental threats to computers and information systems
		• Written assessment
		
		• Oral assessment
		
		• Practical assessment

		5.1.4.2 Physical threats to computer	
		5.1.4.2.1 Theft of hardware	
		5.1.4.2.2 Hardware failure	
		5.1.4.2.3 Unauthorized access to physical components of a computer system	
		5.1.4.2.4 Power surges and outages	
		5.1.5 Computer crimes	
		5.1.5.1 Types of computer crimes	
		5.1.5.2 Detection and protection against computer crimes	
		5.1.6 Cybersecurity control measures	
		5.1.6.1 Physical controls	
		5.1.6.2 Technical/logical (passwords, pins, biometrics)	
		5.1.6.3 Operational controls	
		5.1.7 Policies and Laws governing protection of ICT in Kenya	
		5.1.7.1 The computer Misuse and Cybercrimes Act No.5 of 2018	
		5.1.7.2 The Data Protection Act No. 24 of 2019	
		Practice	
		5.2 Create password and biometrics to prevent unauthorized access	
		5.3 Use Anti-virus	
		5.4 Apply file security	
		5.5 Backup data	

6	Perform online jobs	**Theory**
		
		6.1 Online jobs
		
		  6.1.1 Types of online jobs
		
		  6.1.2 Online job platforms
			• Written assessment
			• Oral assessment

	6.1.2.1 Remotask	• Practical assessment
	6.1.2.2 Cloud worker	• Project
	6.1.2.3 Data annotation tech	
	6.1.2.4 Freelance	
	6.1.2.5 Indeed	
	6.1.2.6 Oneforma	
	6.1.2.7 Appen	
	6.1.3 Online account and profile management	
	6.1.3.1 Types of online accounts and profiles	
	6.1.3.2 Creating online accounts	
	6.1.3.3 Managing profiles	
	6.1.4 Online job bidding identification	
	6.1.4.1 Benefits of online biding	
	6.1.4.2 Examples of online bidding	
	6.1.5 Online digital identity	
	6.1.6 Executing online task	
	6.1.6.1 Executing online task effectively	
	6.1.7 Management of online payment accounts	
	6.1.7.1 Types of online payment accounts	
	6.1.7.2 Online payment process	
	6.1.7.3 Steps for effective management	
	Practice	
	6.2 Search online jobs platforms	
	6.3 Create an online account	
	6.3.1 Setup profile	
	6.3.2 Identify online job bidding	
	6.3.3 Create new project	
7 Apply job entry techniques	**Theory**	• Written Assessment
	7.1 Job Entry Techniques	• Practical assessment
	7.1.1 Types of job opportunities	
	7.1.1.1 Self-employment	

	7.1.1.2 Salaried employment	• Oral assessment
	7.1.1.3 Service provision	• Portfolio of evidence
	7.1.1.4 Product development	
	7.1.2 Sources of job opportunities (websites	
	7.1.3 Functional writings	
	7.1.3.1 Resumes/CV building with word processing tools	
	7.1.3.2 Crafting effective Cover letters	
	7.1.4 Digital portfolios	
	7.1.4.1 Academic credentials	
	7.1.4.2 References and testimonials	
	7.1.4.2.1 letter of commendations	
	7.1.4.3 Certification participations	
	7.1.4.4 Awards and decorations	
	7.1.5 Interview skills	
	7.1.5.1 Introduction to interview	
	7.1.5.1.1 Virtual interviews	
	7.1.5.1.2 Phone interviews	
	7.1.5.1.3 Recorded video responses	
	7.1.5.2 Preparing for virtual interview	
	7.1.5.2.1 Setting up your space (quiet environment, background, lighting)	
	7.1.5.2.2 Technical readiness (internet connection, camera, microphone)	
	7.1.5.3 Professional presence on camera	
	7.1.5.3.1 Body language (posture, eye contact)	
	7.1.5.3.2 Clear and confident communication	
	7.1.5.3.3 Grooming for a virtual environment	

| | 7.1.5.4 Digital etiquette for virtual interviews

    7.1.5.4.1 Time management (logging in early and checking connections)

    7.1.5.4.2 Muting/unmuting appropriately

    7.1.5.4.3 Handling technical issues

    7.1.5.4.4 Using chat features for technical issues

    7.1.5.4.5 Closing the interview/meeting (thank the interviewer and log out promptly)

Practice

7.2 Create a resume and cover letters

7.3 Using a platform Google site build a portfolio that highlights projects, skills, and accomplishments | |

Suggested Methods of Instruction

- Demonstration by the trainer
- Practical work by trainees
- Viewing of related videos
- Case study
- Role playing
- Project
- Group discussions
- Direct instruction

Recommended Resources for 25 Trainees

S/No.	Category/Item	Description/Specifications	Quantity	Recommended Ratio (Item: Trainee)
A	**Learning Materials**			
1.	Textbooks		5 pcs	1:5
2.	Charts			
3.	PowerPoint presentations	For trainer's use		
4.	Whiteboard		1	
5.	Assorted color of whiteboard markers			
6.	Printers		2	
7.	External storage media			
8.	Projector		1	
9.	Whiteboard		1	
10.	Smart board/ Smart TV (where applicable)			
B	**Learning Facilities & infrastructure**			
1.	Lecture/theory room	Size??	1	1:25
2.	Projector		1	
3.	Telephone			
4.	samples of CV		5	
5.	Assorted Flash Cards		25	
6.	Site	Size?	1	1:25
C	**Consumable materials**			
1.	Printing Papers			
2.	Assorted color of whiteboard marker			
D	**Tools and Equipment**			
1.	Desktop computers/laptops with the following software: i. Windows /Linux/Macintosh Operating System ii. Microsoft Office Software		15 pcs	

	iii. Google Workspace Account iv. Antivirus Software				
2.	Internet connection	For trainer's use			
3.	Rolls flip charts	For trainer's use	1	1:1	
4.	Assorted Flash Cards	For trainer's use	1	1:1	
5.	Telephone	For trainer's use	1	1:1	