



**COMPETENCY BASED CURRICULUM
FOR
ELECTRICAL ENGINEERING (POWER OPTION)**

KNQF LEVEL: 6

ISCED PROGRAMME CODE: 0713 554B



**TVET CDACC
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DIGITAL LITERACY

UNIT CODE: ENG/CU/PO/BC/01/6/B

Relationship to Occupational Standards

This unit addresses the Unit of Competency: Apply Digital Literacy

Duration of Unit: 80 Hours

Unit Description

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

Summary of Learning Outcomes

1. Operate Computer Devices
2. Solve Tasks Using Office Suite
3. Manage Data and Information
4. Perform Online Communication and Collaborations
5. Apply Cybersecurity Skills
6. Perform Online Jobs
7. Apply job entry techniques.

Learning Outcomes, Content, and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Operate computer devices	<ul style="list-style-type: none">● Meaning and importance of digital literacy● Functions and Uses of Computers● Classification of computers● Components of a computer system● Computer Hardware<ul style="list-style-type: none">● The System Unit E.g. Motherboard, CPU, casing● Input Devices e.g. Pointing,	<ul style="list-style-type: none">● Observation● Written assessment● Oral assessment● Practical assessment

Learning Outcome	Content	Suggested Assessment Methods
	<p>keying, scanning, voice/speech recognition, direct data capture devices.</p> <ul style="list-style-type: none"> • Output Devices e.g. hardcopy output and softcopy output • Storage Devices e.g. main memory e.g. RAM, secondary storage (Solid state devices, Hard Drives, CDs & DVDs, Memory cards, Flash drives • Computer Ports e.g. HDMI, DVI, VGA, USB type C etc. • Classification of computer software • Operating system functions • Procedure for turning/off a computer • Mouse use techniques • Keyboard Parts and Use Techniques • Desktop Customization • File and Files Management using an operating system • Computer Internet Connection Options <ul style="list-style-type: none"> • Mobile Networks/Data Plans • Wireless Hotspots • Cabled (Ethernet/Fiber) • Dial-Up • Satellite • Computer external devices management <ul style="list-style-type: none"> • Device connections 	

Learning Outcome	Content	Suggested Assessment Methods
	<ul style="list-style-type: none"> Device controls (volume controls and display properties) 	
2. Solve tasks using Office suite	<ul style="list-style-type: none"> Meaning and Importance of Word Processing Examples of Word Processors Working with word documents <ul style="list-style-type: none"> Open and close word processor Create a new document Save a document Switch between open documents Enhancing productivity <ul style="list-style-type: none"> Set basic options/preferences Help resources Use magnification/zoom tools Display, hide built-in tool bar Using navigation tools Typing Text Document editing (copy, cut, paste commands, spelling and Grammar check) Document formatting <ul style="list-style-type: none"> Formatting text Formatting paragraph Formatting styles Alignment Creating tables 	<ul style="list-style-type: none"> Observation Portfolio of Evidence Project Written assessment Practical assessment Oral assessment

Learning Outcome	Content	Suggested Assessment Methods
	<ul style="list-style-type: none"> • Formatting tables • Graphical objects <ul style="list-style-type: none"> • Insert object (picture, drawn object) • Select an object • Edit an object • Format an object • Document Print setup <ul style="list-style-type: none"> • Page layout, • Margins set up • Orientation. • Word Document Printing • Meaning & Importance of electronic spreadsheets • Components of Spreadsheets • Application areas of spreadsheets • Using spreadsheet application <ul style="list-style-type: none"> • Parts of Excel screen: ribbon, formula bar, active cell, name box, column letter, row number, Quick Access Toolbar. • Cell Data Types • Block operations • Arithmetic operators (formula bar (-, +, *, /)). • Cell Referencing • Data Manipulation <ul style="list-style-type: none"> • Using Functions (Sum, Average, SumIF, Count, Max, Min, IF, Rank, Product, mode etc) • Using Formulae • Sorting data 	

Learning Outcome	Content	Suggested Assessment Methods
	<ul style="list-style-type: none"> ● Filtering data ● Visual representation using charts ● Worksheet printing ● Electronic Presentations ● Meaning and Importance of electronic presentations ● Examples of Presentation Software ● Using the electronic presentation application <ul style="list-style-type: none"> ● Parts of the PowerPoint screen (slide navigation pane, slide pane, notes, the ribbon, quick access toolbar, and scroll bars). ● Open and close presentations ● Creating Slides (Insert new slides, duplicate, or reuse slides.) ● Text Management (insert, delete, copy, cut and paste, drag and drop, format, and use spell check). ● Use magnification/zoom tools ● Apply or change a theme. ● Save a presentations ● Switch between open presentations ● Developing a presentation <ul style="list-style-type: none"> ● Presentation views ● Slides ● Master slide ● Text <ul style="list-style-type: none"> ● Editing text ● Formatting ● Tables 	

Learning Outcome	Content	Suggested Assessment Methods
	<ul style="list-style-type: none"> • Charts <ul style="list-style-type: none"> • Using charts • Organization charts • Graphical objects <ul style="list-style-type: none"> • Insert, manipulate • Drawings • Prepare outputs <ul style="list-style-type: none"> • Applying slide effects and transitions • Check and deliver <ul style="list-style-type: none"> • Spell check a presentation • Slide orientation • Slide shows, navigation • Print presentations (slides and handouts) 	
3. Manage Data and Information	<ul style="list-style-type: none"> • Meaning of Data and information • Importance and Uses of data and information • Types of internet services <ul style="list-style-type: none"> • Communication Services • Information Retrieval Services • File Transfer • World Wide Web Services • Web Services • Automatic Network Address Configuration • NewsGroup • Ecommerce • Types of Internet Access Applications • Web browsing concepts 	<ul style="list-style-type: none"> • Observation • Portfolio of Evidence • Project • Written assessment • Practical assessment • Oral assessment

Learning Outcome	Content	Suggested Assessment Methods
	<ul style="list-style-type: none"> • Key concepts • Security and safety • Web browsing <ul style="list-style-type: none"> • Using the web browser • Tools and settings • Clearing Cache and cookies • URIs • Bookmarks • Web outputs • Web based information <ul style="list-style-type: none"> • Search • Critical evaluation of information • Copyright, data protection • Downloads Management • Performing Digital Data Backup (Online and Offline) • Emerging issues in internet 	
4. Perform online communication and collaboration	<ul style="list-style-type: none"> • Netiquette principles • Communication concepts <ul style="list-style-type: none"> • Online communities • Communication tools • Email concepts • Using email <ul style="list-style-type: none"> • Sending email • Receiving email • Tools and settings • Organizing email • Digital content copyright and licenses • Online collaboration tools <ul style="list-style-type: none"> • Online Storage (Google Drive) 	<ul style="list-style-type: none"> • Observation • Portfolio of Evidence • Project • Written assessment • Practical assessment • Oral assessment

Learning Outcome	Content	Suggested Assessment Methods
	<ul style="list-style-type: none"> • Online productivity applications (Google Docs & Forms) • Online meetings (Google Meet/Zoom) • Online learning environments • Online calendars (Google Calendars) • Social networks (Facebook/Twitter - Settings & Privacy) • Preparation for online collaboration <ul style="list-style-type: none"> • Common setup features • Setup • Mobile collaboration <ul style="list-style-type: none"> • Key concepts • Using mobile devices • Applications • Synchronization 	
5. Apply cybersecurity skills	<ul style="list-style-type: none"> • Data protection and privacy <ul style="list-style-type: none"> • Confidentiality of data/information • Integrity of data/information • Availability of data/information • Internet security threats <ul style="list-style-type: none"> • Malware attacks • Social engineering attacks • Distributed denial of service (DDoS) • Man-in-the-middle attack (MitM) • Password attacks • IoT Attacks • Phishing Attacks 	<ul style="list-style-type: none"> • Observation • Portfolio of Evidence • Project • Written assessment • Practical assessment • Oral assessment

Learning Outcome	Content	Suggested Assessment Methods
	<ul style="list-style-type: none"> • <u>Ransomware</u> • Computer threats and crimes • Cybersecurity control measures <ul style="list-style-type: none"> • Physical Controls • Technical/Logical Controls (Passwords, PINs, Biometrics) • Operational Controls • Laws governing protection of ICT in Kenya <ul style="list-style-type: none"> • The Computer Misuse and Cybercrimes Act No. 5 of 2018 • The Data Protection Act No. 24 Of 2019 	
6. Perform Online Jobs	<ul style="list-style-type: none"> • Introduction to online working • Types of online Jobs • Online job platforms <ul style="list-style-type: none"> • Remotask • Data annotation tech • Cloud worker • Upwork • Oneforma • Appen • Online account and profile management • Identifying online jobs/job bidding • Online digital identity • Executing online tasks • Management of online payment accounts. 	<ul style="list-style-type: none"> • Observation • Portfolio of Evidence • Project • Written assessment • Practical assessment • Oral assessment
7. Apply job entry techniques	<ul style="list-style-type: none"> • Types of job opportunities <ul style="list-style-type: none"> • Self employment • Service provision • product development 	<ul style="list-style-type: none"> • Observation • Oral assessment • Portfolio of evidence

Learning Outcome	Content	Suggested Assessment Methods
	<ul style="list-style-type: none"> ● salaried employment ● Sources of job opportunities ● Resume/ curriculum vitae <ul style="list-style-type: none"> ● What is a CV ● How long should a CV be ● What to include in a AC ● Format of CV ● How to write a good CV ● Don'ts of writing a CV ● Job application letter <ul style="list-style-type: none"> ● What to include ● Addressing a cover letter ● Signing off a cover letter <p>Portfolio of Evidence</p> <ul style="list-style-type: none"> ● Academic credentials ● Letters of commendations ● Certification of participations ● Awards and decorations <p>Interview skills</p> <ul style="list-style-type: none"> ● Listening skills ● Grooming ● Language command ● Articulation of issues ● Body language ● Time management ● Honesty ● Generally knowledgeable in current affairs and technical area 	<ul style="list-style-type: none"> ● Third party report ● Written assessment

Suggested Methods Instruction

- Instructor-led facilitation using active learning strategies
- Demonstration by trainer

- Practical work by trainees
- Viewing of related videos
- Group discussions
- Project
- Role play
- Case study

Recommended Resources for 25 Trainees

- 25 computers with the following software:
 - Windows/Linux/Macintosh Operating System
 - Microsoft Office Software
 - Google Workspace Account
 - Antivirus Software
- 2 Printers
- Printing Papers
- External storage media
- 1 Projector
- 1 Whiteboard
- 1 Smartboard/Smart TV (Where applicable)
- Assorted whiteboard markers
- Internet connection
- 5 samples of CVs
- 5 samples of job applications