

80 -100	Attained Mastery
65 - 79	Proficient
50 - 64	Competent
49 and below	Not Yet Competent
Y	Assessment Malpractice/irregularities

- g) Assessment for Recognition of Prior Learning (RPL) may lead to award of part and/or full qualification.

Certification

A candidate will be issued with a Certificate of Competency upon demonstration of competence in a core Unit of Competency. To be issued with Kenya National TVET Certificate in Software Development Level 6 the candidate must demonstrate competence in all the Units of Competency as given in the qualification pack. A Statement of Attainment certificate may be issued upon demonstration of competence in a certifiable element within a unit.

The certificates will be issued by the TVET CDACC

MODULE I

Unit Category	Unit Code	TVET CDACC UNIT CODE	Unit Name	Unit Duration (Hours)
COMMON	0611 441 03A	ICT/CU/SD/CC/01/5/MA	COMPUTER OPERATIONS	90
COMMON	0613 451 06A	ICT/CU/SD/CC/02/5/MA	STRUCTURED PROGRAMMING	220
CORE	0611 451 07A	ICT/CU/SD/CR/01/5/MA	SOFTWARE SYSTEM REQUIREMENTS	110
			TOTAL	420

COMPUTER OPERATIONS

ISCED UNIT CODE: 0611 441 03A

TVET CDACC UNIT CODE: ICT/CU/SD/CC/01/5/MA

Duration of Unit: 90 hours

Relationship to Occupational Standards

This unit addresses the Unit of Competency: Apply Computer Operations

Unit Description

This unit covers the competencies required to apply computer operations. It involves processing computerized word documents, manipulating computerized spreadsheets, maintaining computerized databases, prepare presentation slides, manipulating graphic application and performing online collaboration.

Summary of Learning Outcomes

Learning Outcomes	Duration (Hours)
1. Process computerized word document	20
2. Manipulate computerized spreadsheet	25
3. Maintain computerized database	15
4. Prepare Power point presentation	10
5. Manipulate graphic application	10
6. Perform online collaboration	10
TOTAL	90

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Process computerized word document	1.1 Ergonomic risk factors 1.2 Operating Computer devices 1.2.1 Meaning and importance of computer	● Practical assessment ● Simulations ● Project ● Observation Checklist

	1.2.2 Functions and Uses of Computers 1.2.3 Classification of computers 1.2.4 Components of a computer system 1.2.5 Computer Hardware 1.2.5.1 The System Unit 1.2.5.2 Input Devices 1.2.5.2.1 Mouse use techniques 1.2.5.2.2 Keyboard Parts and Use Techniques 1.2.5.3 Output Devices 1.2.5.4 Storage Devices 1.2.5.5 Computer Ports 1.2.6 Procedure for turning/off a computer 1.2.7 Desktop Customization 1.2.8 File and Files Management using an operating system 1.2.9 Computer external devices management 1.3 Creation of computerized word document 1.3.1 Introduction to word document 1.3.2 Types of word processors 1.3.3 Creating word document 1.4 Editing and formatting word document 1.3.4 Word document editing features 1.3.4.1 Text editing 1.3.4.2 Paragraph editing 1.3.4.3 Document editing 1.4.1 Word document formatting features 1.3.4.4 Text formatting 1.3.4.5 Paragraph formatting 1.3.4.6 Document formatting	● Product Checklist ● Written assessment ● Portfolio of evidence
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	1.4.2 Enhancing productivity 1.3.4.7 Set basic options/ preferences 1.3.4.8 Help resources 1.3.4.9 Use magnification/zoom tools 1.3.4.10 Display, hide built-in tool bar 1.5 Mail merge 1.5.1 Mail merge preparation 1.5.2 Mail merge output 1.6 Printing of computerized word document 1.6.1 Print setup 1.6.2 Printing	
2. Manipulate computerized spreadsheet	2.1 Creation of Computerized spreadsheet workbook 2.1.1 Spreadsheet concepts 2.1.2 Elements of spreadsheet window 2.1.2.1 Worksheet 2.1.2.2 workbook 2.1.2.3 Rows 2.1.2.4 columns 2.1.2.5 Cells 2.2 Cell referencing 2.2.1.1 Relative cell referencing 2.2.1.2 Absolute cell referencing 2.2.1.3 Mixed cell referencing 2.2.2 Spreadsheet editing features 2.2.2.1 Worksheet editing 2.2.2.2 Inserting	● Practical assessment ● Simulations ● Project ● Observation Checklist ● Product Checklist ● Written assessment ● Portfolio of evidence

	- rows/columns 2.2.2.3 Removing rows/columns 2.2.2.4 Adjusting row heights and column width 2.2.2.5 Inserting worksheets 2.2.2.6 Renaming worksheets 2.2.2.7 Move or copy worksheets 2.2.2.8 Deleting worksheets 2.2.3 Data manipulation in spreadsheets 2.2.3.1 Data entry 2.2.3.2 Types of data	
	2.3 Formulas and functions 2.3.1.1 Formulas and functions syntax 2.3.1.2 Arithmetic functions 2.3.1.3 logical functions 2.3.1.4 Look up functions 2.3.2 Computerized spreadsheet worksheet formatting 2.3.2.1 Font styles 2.3.2.2 Alignment 2.3.2.3 Borders and shading 2.3.2.4 Header and footer 2.4 Charts generation 2.4.1.1 Types of charts 2.4.1.2 Insert charts 2.4.1.3 Labelling and Editing charts 2.4.1.4 Computerized spreadsheet	

	workbook printing 2.4.1.5 Print setup 2.4.1.6 Printing	
3. Maintain computerised database	3.1 Computerised database user requirements collection 3.1.1 Introduction to database 3.1.1.1 Key concepts 3.1.1.2 Database organisation 3.1.1.3 Database relationships 3.1.1.4 Database operations 3.1.2 Collection of User requirements 3.2 Design Computerised database schema 3.2.1 Creating database models 3.2.1.1 ERD models 3.2.1.2 Relational models 3.3 Creation of Computerised database objects 3.3.1 Database Objects 3.3.1.1 Tables 3.3.1.2 Records 3.3.1.3 Fields 3.3.1.4 Keys 3.3.1.5 Forms 3.3.1.6 Queries 3.3.1.7 Reports 3.4 Data manipulation 3.4.1 Inserting records 3.4.2 Retrieving records 3.4.3 Deleting records 3.4.4 Updating record 3.4.5 Printing database objects 3.4.5.1 Tables 3.4.5.2 Forms	● Practical assessment ● Simulations ● Project ● Observation Checklist ● Product Checklist ● Written assessment ● Portfolio of evidence

	3.4.5.3 Queries 3.4.5.4 Reports	
4. Prepare Power point presentation	4.1 Collection of Presentation requirements 4.1.1 Definition of terms 4.2.1 Presentation requirements 4.2.2 Types of presentation software 4.2.3 Elements of presentation window 4.2.4 Manipulating presentations 4.2.4.1 Create a PowerPoint presentation 4.2.4.2 Save a PowerPoint presentation 4.2.5 Working with presentations 4.2.5.1 Switch between open PowerPoint presentations 4.2 Design presentation layout 4.2.1 Types of presentation layout 4.2.2 Factors to consider when designing presentation layout 4.3 Creation of a Slide 4.3.1 Slide views 4.3.2 Slide designs 4.3.3 Slide transition 4.4 Manipulation of a slide 4.4.1 Adding data/text to a slide 4.4.2 Slide animation 4.4.3 Formatting data/text 4.4.4 Move/copy/delete a slide 4.4.5 Inserting header and footer 4.4.6 Presentation objects	● Practical assessment ● Simulations ● Project ● Observation Checklist ● Product Checklist ● Written assessment ● Portfolio of evidence

	4.2.5.2 Tables 4.2.5.3 charts 4.4.7 Print setup 4.2.5.4 Printing PowerPoint presentation	
5. Manipulate graphic application	5.1 Collecting graphic design requirements 5.1.1 Definition of terms 5.1.2 Graphic application requirements 5.1.3 Types of graphic application software 5.1.4 Types of publications designs 5.1.4.1 Templates 5.1.4.2 Banners 5.1.4.3 Booklets 5.1.4.4 Brochures 5.1.4.5 Flyers 5.1.4.6 Posters 5.1.4.7 Cards 5.1.4.8 Certificates 5.1.4.9 Magazines 5.1.5 Elements of Graphic application window 5.2 Creation of graphic design 5.2.1 Perform basic tasks using graphic application software 5.2.1.1 Publication type 5.2.1.2 Page setup 5.2.1.3 Ruler/guides 5.2.1.4 Page views 5.2.2 Add content to a publication 5.2.3 Edit content to a publication 5.2.4 Format text and paragraphs in a publication	● Practical assessment ● Simulations ● Project ● Written assessment ● Portfolio of evidence

	5.2.5 Page formatting in a publication 5.2.5.1 Columns 5.2.5.2 Borders and shading 5.2.5.3 Headers and footers 5.2.5.4 Background 5.2.5.5 Watermarks 5.2.5.6 Orientation 5.2.6 Work with graphics objects in a publication 5.2.6.1 Textbox 5.2.6.2 Tables 5.2.6.3 Shapes 5.2.6.4 Pictures 5.2.6.5 (PNG, JPEG, GIF) 5.3 Publishing of graphic design 5.3.1 Prepare a publication 5.3.2 Print setup 5.3.3 Printing publication	
6. Perform Online Collaboration	6.1 Identification of Online collaboration tools 6.1.1 Definition of online collaboration 6.1.2 Importance of online collaboration 6.1.3 Factors to consider when choosing an online collaboration tool 6.1.4 Online collaboration tools 6.1.4.1 Microsoft teams 6.1.4.2 Skype 6.1.4.3 Google drive 6.1.4.4 Zoom 6.1.4.5 Google meet 6.1.4.6 Slack 6.2 Online collaboration preparation	● Practical assessment ● Simulations ● Project ● Observation Checklist ● Product Checklist ● Written assessment ● Portfolio of evidence

	6.2.1 Online collaboration key concepts 6.2.2 Common setup features 6.2.2.1 Download software to support online collaboration tools 6.2.2.2 Register and/ or set a user account 6.2.3 Preparation for online collaboration 6.3 Application of online collaborative tools 6.3.1 Using online collaborative tools 6.3.1.1 Online storage media 6.3.1.2 Using email 6.3.1.2.1 Sending and receiving email 6.3.1.2.2 Tools and settings 6.3.1.2.3 Organizing email 6.3.1.3 Using calendars 6.3.1.4 Online calendars 6.3.1.5 Social media 6.3.1.6 Online learning environment 6.3.1.7 Synchronization tools 6.4 Demonstrating Mobile collaborations 6.4.1 Key concepts in mobile applications 6.4.2 Mobile applications permissions 6.4.3 Synchronization	
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