COMPETENCY BASED CURRICULUM

FOR

INFORMATION COMMUNICATION TECHNOLOGY

KNQF LEVEL 5

PROGRAMME ISCED CODE: 061 2454A

COMPUTER OPERATIONS

UNIT CODE: 0611 351 02A

Duration of Unit: 150 hours

Relationship to Occupational Standards

This unit addresses the Unit of Competency: Perform Computer Operations

Unit Description

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

Summary of Learning Outcomes

Learning Outcomes	Durations(Hours)
1. Process computerized word document	30
2. Manipulate computerized spreadsheet	30
3. Maintain computerized database	30
4. Prepare PowerPoint presentation	20
5. Manipulate graphic application	25
6. Perform online collaboration	15
Total Hours:	**150**

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods

1. Process computerized word document	1.1 Ergonomics risk factors
	1.2 Creation of computerized word document
	   1.2.1 Introduction to word document
	   1.2.2 Types of word processors
	   1.2.3 Creating word document
	   1.2.4 Editing and formatting word document
	   1.2.5 Word document editing features
	     1.2.5.1 Text editing
	     1.2.5.2 Paragraph editing
	     1.2.5.3 Document editing
	   1.2.6 Word document formatting features
	     1.2.6.1 Text formatting
	     1.2.6.2 Paragraph formatting
	     1.2.6.3 Document formatting
	   1.2.7 Enhancing productivity
	     1.2.7.1 Set basic options/ preferences
	     1.2.7.2 Help resources
	     1.2.7.3 Use magnification/zoom tools
	     1.2.7.4 Display, hide built-in tool bar
	1.3 Creation and manipulation of tables
	   1.3.1 Inserting tables
	   1.3.2 Working with tables
	1.4 Mail merge
	   1.5.1 Mail merge preparation
		● Practical assessment
		● Simulations
		● Project
		● Observation Checklist
		● Product Checklist
		● Written assessment
		● Portfolio of evidence

	1.5.2 Mail merge output	
	1.5 Inserting word processing objects	
	1.5.1 Picture	
	1.5.2 Shapes	
	1.5.3 Table	
	1.5.4 Charts	
	1.6 Generating list of figures and table of content	
	1.6.1 List of figures	
	1.6.2 Table of content	
	1.7 Printing of computerized word document	
	1.7.1 Print setup	
	1.7.2 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
		• Practical assessment
		 • Simulations
		 • Project
		 • Observation Checklist
		 • Product Checklist
		 • Written assessment
		 • Portfolio of evidence

	2.2.2 Spreadsheet editing features
	    2.2.2.1 Worksheet editing
	    2.2.2.2 Inserting 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
		● Practical assessment
		● Simulations
		● Project
		● Observation Checklist
		● Product Checklist
		● Written assessment
		● Portfolio of evidence

	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
	     3.4.5.3 Queries
	     3.4.5.4 Reports	

4. Prepare Power point presentation	4.1 Collecting PowerPoint Presentation
	requirements
	   4.1.1 Definition of terms
	   4.1.2 Presentation requirements
	   4.1.3 Types of presentation
	       software
	   4.1.4 Elements of presentation
	       window
		● Practical assessment
		● Simulations
		● Project
		● Observation Checklist
		● Product Checklist
		● Written assessment
		● Portfolio of evidence

	4.2 Creating PowerPoint slides	
	4.2.1 Types of presentation layout	
	4.2.2 Factors to consider when designing presentation layout	
	4.2.3 Design a PowerPoint presentation	
	4.2.4 Create a PowerPoint presentation	
	4.2.5 Save a PowerPoint presentation	
	4.3 Exhibit presentation views	
	4.3.1 Slide views	
	4.3.2 Working with presentations	
	4.3.2.1 Switch between open PowerPoint presentations	
	4.4 Perform animation and transitions	
	4.4.1 Slide animation	
	4.4.2 Slide transition	
	4.5 Manipulation of PowerPoint slides	
	4.5.1 Adding data/text to a slide	
	4.5.2 Formatting data/text	
	4.5.3 Move/copy/delete a slide	
	4.5.4 Inserting header and footer	
	4.5.5 Presentation objects	
	4.5.5.1 Tables	
	4.5.5.2 Charts	

	4.6 Printing of PowerPoint slides	
	4.6.1 Print setup	
	4.6.2 Printing PowerPoint presentation	

5. Manipulate graphic application	5.1 Identifying 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
		● Practical assessment
		● Simulations
		● Project
		● Written assessment
		● Portfolio of evidence

	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
	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 document production	6.1 Printing documents 6.1.1 Introduction to document production	● Practical assessment ● Simulations ● Project

	6.1.2 Types of printers 6.1.3 Document printing 6.2 Document scanning 6.2.1 Types of scanners 6.2.2 Document scanning 6.3 Document duplication	● Observation Checklist ● Product Checklist ● Written assessment ● Portfolio of evidence
7. Perform Online Collaboration	7.1 Identification of Online collaboration tools 7.1.1 Definition of online collaboration 7.1.2 Importance of online collaboration 7.1.3 Factors to consider when choosing an online collaboration tool 7.1.4 Online collaboration tools 7.1.4.1 Microsoft teams 7.1.4.2 Skype 7.1.4.3 Google drive 7.1.4.4 Zoom 7.1.4.5 Google meet 7.1.4.6 Slack 7.2 Online collaboration preparation 7.2.1 Online collaboration key concepts 7.2.2 Common setup features 7.2.2.1 Download software to support online collaboration tools 7.2.2.2 Register and/ or set a user account	● Practical assessment ● Simulations ● Project ● Observation Checklist ● Product Checklist ● Written assessment ● Portfolio of evidence

7.2.3 Preparation for online collaboration
 	
7.3 Application of online collaborative tools
 	
   7.3.1 Using online collaborative tools
 	
     7.3.1.1 Online storage media
 	
     7.3.1.2 Using email
 	
       7.3.1.2.1 Sending and receiving email
 	
       7.3.1.2.2 Tools and settings
 	
       7.3.1.2.3 Organizing email
 	
     7.3.1.3 Using calendars
 	
     7.3.1.4 Online calendars
 	
     7.3.1.5 Social media
 	
     7.3.1.6 Online learning environment
 	
     7.3.1.7 Synchronization tools
 	
7.4 Demonstrating Mobile collaborations
 	
   7.4.1 Key concepts in mobile applications
 	
   7.4.2 Mobile applications permissions
 	
   7.4.3 Synchronization	

Suggested Delivery Methods

- Demonstration by trainer
- Practical work by trainee
- Viewing of related videos
- Group discussions
- Facilitation using active learning strategies

Recommended Resources for 25 Trainees

S/No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Trainee: Item)
A	**Learning Materials**			
1.	Textbooks	For trainees' use	5 pcs	5:1
2.	Installation manuals	For trainer's use	5 pcs	5:1
3.	Flip Charts	For trainer's use	5 pcs	5:1
4.	PowerPoint presentations	For trainer's use		
5.	Magazines/brochures/business cards	For trainees' use	5 pcs	5:1
B	**Learning Facilities & infrastructure**			
6.	Lecture/theory room	For training	1	25:1
7.	Laboratory	For training	1	25:1
C	**Consumable materials**			
8.	Printing papers	For printing	1 ream	1:20
9.	Foolscaps	For writing	1 ream	
10.	Toners/cartridges	For printers	2 pcs	13:1
11.	Assorted colour of whiteboard markers	For writing		
D	**Tools and Equipment**			
12.	Computers	For training	25 pcs	1:1

13.	Projector	For projecting	1 pc	25:1
14.	Printers	For prining	2 pcs	1:13
15.	Whiteboard	For writing	1 pc	25:1
16.	Flash drives	For sharing data	5 pcs	5:1
17.	1 External Hard drive	For storage of data	1 pcs	25:1
18.	Application software suite	For training	5 pcs	5:1