



Republic of Rwanda  
Ministry of Education



RTB | RWANDA  
TVET BOARD

## INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)

**CCMIW502**

### Use ICT at workplace

#### Competence

RQF Level: 5

Learning Hours



Credits: 3

Sector: All

Trade: All

Module Type: Complementary Module

Curriculum: All

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<b>Purpose statement</b>	<p>This course focuses on providing skills, experience and confidence for those learners who struggle to make the most of technology to demonstrate creative thinking, problem solving and knowledge construction. It focuses on completing workplace tasks: such as researching and creating documents with text, graphics and numerical information using commonly used tools such as: Microsoft Office – (Word, Excel) and internet.</p> <p>Learners gain ability to appropriately select and responsibly use ICT to be able to: Problem-solve, Communicate and collaborate, Locate, use and synthesize information found using technology and Develop skills necessary to function in this century.</p>					
<b>Delivery modality</b>	<b>Training delivery</b>		<b>100%</b>	<b>Assessment</b>	<b>Total 100%</b>	
	Theoretical content		30%	Formative assessment	30%	
	Practical work:		70%		70%	100%
	• Group Work and presentation	20%				
	• Individual Work	50%				
		Summative Assessment		<b>N/A</b>		

### Elements of Competency and Performance Criteria

Elements of competency	Performance criteria
<b>1. Prepare document Layout</b>	<b>1.1.</b> Document is properly set up according to the page layout
	<b>1.2.</b> Document is properly worked with the pictures/images
	<b>1.3.</b> Document is properly created within the references
<b>2. Apply basic computer operations</b>	<b>2.1.</b> Files are appropriately Converted according to the file format
	<b>2.2.</b> Storage media is appropriately used according to its capacity
	<b>2.3.</b> Computer is properly connected according to the network types on size and main purpose
<b>3. Manage data in MS Excel</b>	<b>3.1.</b> Data types are properly managed in Microsoft Excel
	<b>3.2.</b> Excel functions are adequately applied according to the conditions
	<b>3.3.</b> Data analysis is adequately performed according to the presentation of information
	<b>3.4.</b> Data protection is properly applied according to their principles

## Course content

<b>Learning outcomes</b>	<b>At the end of the module the learner will be able to:</b> <ol style="list-style-type: none"><li>1. Prepare document Layout</li><li>2. Apply basic computer operations</li><li>3. Manage data in MS Excel</li></ol>
<b>Learning outcome 1: Prepare document Layout</b>	<b>Learning hours: 10</b>
<b>Indicative content</b>	
<ul style="list-style-type: none"><li>• <b>Set up of a document</b><ul style="list-style-type: none"><li>✓ Page layout/page set up<ul style="list-style-type: none"><li>✚ Page margins</li><li>✚ Paper orientation</li><li>✚ Page size and columns</li><li>✚ Section breaks</li><li>✚ Hyphenation</li></ul></li><li>✓ Page background<ul style="list-style-type: none"><li>✚ Watermark</li><li>✚ Page colour</li><li>✚ Page borders</li></ul></li><li>✓ Advanced formatting<ul style="list-style-type: none"><li>✚ Font/colour/effects</li><li>✚ Border and shading</li><li>✚ Indenting paragraph</li><li>✚ Paragraph and line spacing</li></ul></li></ul></li><li>• <b>Working with the pictures/images within the document</b><ul style="list-style-type: none"><li>✓ Insert a picture<ul style="list-style-type: none"><li>✚ Change size of a picture</li><li>✚ Compress a picture</li><li>✚ Increase the Contrast</li></ul></li><li>✓ Picture styles<ul style="list-style-type: none"><li>✚ Picture border</li><li>✚ Picture effects</li><li>✚ Picture layout</li></ul></li><li>✓ Arrange picture<ul style="list-style-type: none"><li>✚ Position of picture</li><li>✚ Wrap text around a picture</li><li>✚ Rotate a picture</li></ul></li></ul></li><li>• <b>Creation of document within references</b><ul style="list-style-type: none"><li>✓ Table of contents</li><li>✓ Footnotes</li><li>✓ Citations and Bibliography</li><li>✓ Captions<ul style="list-style-type: none"><li>✚ Insert captions</li><li>✚ Insert tables of figures</li></ul></li></ul></li></ul>	

**Resources required for the learning outcome**

Equipment	<ul style="list-style-type: none"> <li>• Computer, Projector, Whiteboard, blackboard</li> </ul>
Materials	<ul style="list-style-type: none"> <li>• Markers, chalks, flipchart</li> </ul>
Tools	<ul style="list-style-type: none"> <li>• Microsoft office( Word), reference books</li> </ul>
Facilitation techniques	<ul style="list-style-type: none"> <li>• Individual and group work</li> <li>• Practical exercise</li> <li>• Individualized</li> <li>• Trainer guided</li> <li>• Group discussion</li> </ul>
Formative assessment methods	<ul style="list-style-type: none"> <li>• Written assessment</li> <li>• Performance assessment</li> </ul>

**Learning outcome 2: Apply basic computer operations**

**Learning hours: 10**

**Indicative content**

- **Conversion of data Files**
  - ✓ Different file formats and file extension
  - ✓ File Conversion
    - ✚ File to PDF
    - ✚ PDF to word, excel and PPT
  - ✓ Compress file
    - ✚ Definition
    - ✚ Importance
    - ✚ Steps
- **Use of storage media**
  - ✓ Storage media capacity
    - ✚ Definition
    - ✚ Units of data storage
  - ✓ Different types of storage media
    - ✚ off-line storage
    - ✚ On-line storage
  - ✓ Storage media formatting
    - ✚ Formatting
    - ✚ Erase data
- **Connection of computer to the network**
  - ✓ Description of computer network
    - ✚ Definition of computer network
    - ✚ Features of computer network
    - ✚ Advantages of computer network
    - ✚ Disadvantages of computer network

- ✓ Description of common types of networks based on size
  - ✚ Personal area network (PAN)
  - ✚ Local area network (LAN)
  - ✚ Metropolitan area network (MAN)
  - ✚ Wide area network (WAN)
  - ✚ Wireless Local Area Network (WLAN)
- ✓ Description of common types of networks based on main purpose
  - ✚ Storage area network (SAN)
  - ✚ Enterprise private network (EPN)
  - ✚ Virtual private network (VPN)
- ✓ Connect computer to the internet
  - ✚ Fixed internet
  - ✚ Mobile internet

### Resources required for the indicative content

Equipment	<ul style="list-style-type: none"> <li>• Computer, projector, Whiteboard, router</li> </ul>
Materials	<ul style="list-style-type: none"> <li>• Marker, flipchart</li> </ul>
Tools	<ul style="list-style-type: none"> <li>• Storage devices ( SSD,CD/DVD discs, Flash drive),Reference books</li> </ul>
Facilitation techniques	<ul style="list-style-type: none"> <li>• Individual and group work</li> <li>• Practical exercise</li> <li>• Individualized</li> <li>• Trainer guided</li> <li>• Group discussion</li> </ul>
Formative assessment methods	<ul style="list-style-type: none"> <li>• Written assessment</li> <li>• Oral presentation</li> <li>• Performance assessment</li> </ul>

**Learning outcome 3: Manage data in MS Excel**

**Learning hours: 10**

### Indicative content

- **Management of data types**
  - ✓ Description of data types
  - ✓ Entering data types in cells and their default formats
  - ✓ Sorting data
  - ✓ Finding and replacing cell formats
  - ✓ Removes duplicates
  - ✓ Create data validation rules
- **Apply Excel functions**
  - ✓ Basics functions
    - ✚ Sum
    - ✚ Average
    - ✚ Max
    - ✚ Min
    - ✚ Count
    - ✚ Rank and Grade
  - ✓ Error checking
  - ✓ Creating an absolute reference

<ul style="list-style-type: none"> <li>✓ Using the <b>IF</b> function</li> <li>• <b>Data analysis</b></li> <li>✓ Create Charts</li> <li>✓ Table styles <ul style="list-style-type: none"> <li>✚ Conditional formatting</li> <li>✚ Format as table</li> <li>✚ Cell style</li> </ul> </li> <li>• <b>Application of data protection</b></li> <li>✓ Data protection principles</li> <li>✓ Ways of protecting excel data <ul style="list-style-type: none"> <li>✚ Protect a cell</li> <li>✚ Protect worksheet</li> <li>✚ Protect workbook</li> </ul> </li> </ul>	
<b>Resources required for the indicative content</b>	
Equipment	<ul style="list-style-type: none"> <li>• Computer , projector, Whiteboard</li> </ul>
Materials	<ul style="list-style-type: none"> <li>• Markers, Flipchart</li> </ul>
Tools	<ul style="list-style-type: none"> <li>• Microsoft office ( Excel), Reference books</li> </ul>
Facilitation techniques	<ul style="list-style-type: none"> <li>• Individual and group work</li> <li>• Practical exercise</li> <li>• Individualized</li> <li>• Trainer guided</li> <li>• Group discussion</li> </ul>
Formative assessment methods	<ul style="list-style-type: none"> <li>• Written assessment</li> <li>• Performance assessment</li> </ul>

## References:

1. <https://www.oreilly.com/library/view/word-2007-for/0596528302/ch04.html>
2. <https://edu.gcfglobal.org/en/word2013/page-layout/1/>
3. <https://edu.gcfglobal.org/en/computerbasics/connecting-to-the-internet/1/>
4. <https://www.ablebits.com/office-addins-blog/2014/12/17/excel-and-or-xor-not-functions/>
5. <https://corporatefinanceinstitute.com/resources/knowledge/modeling/protecting-excel-data/>
6. <https://www.geeksforgeeks.org/types-of-computer-networks/>