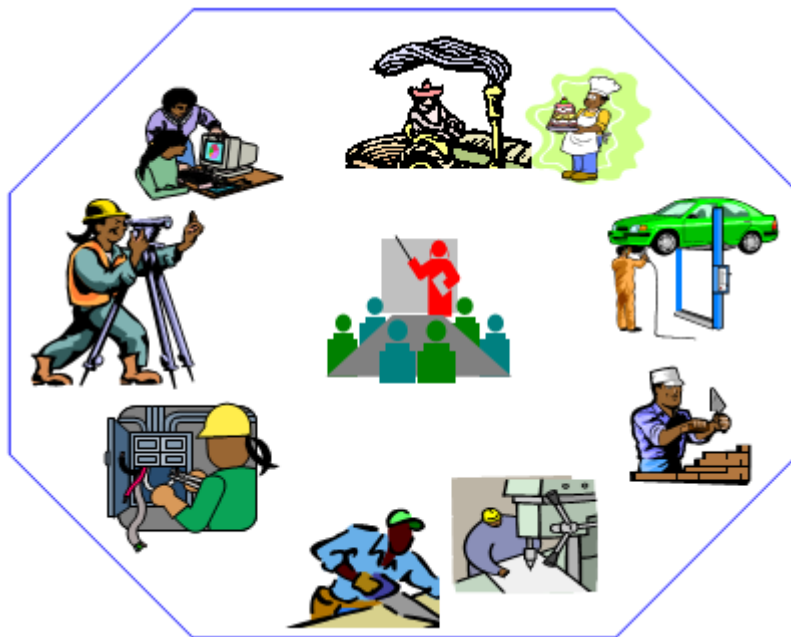# WEB DEVELOPMENT AND DATABASE ADMINISTRATION LEVEL – I

TVET CURRICULUM

Based on December, 2021 Version-IV

Occupational standard (OS)

March, 2022

Adiss Ababa

Preface

The reformed TVET-System is an outcome-based system. It utilizes the needs of the labor market and occupational requirements from the world of work as the benchmark and standard for TVET delivery. The requirements from the world of work are analyzed and documented – taking into account international benchmarking – as occupational standards (OS).

In the reformed TVET-System, curricula and curriculum development play an important role with regard to quality driven comparable TVET-Delivery. The Curricula help to facilitate the training process in a way, that trainees acquire the set of occupational competences (skills, knowledge and attitude) required at the working place and defined in the occupational standards (OS).

This curriculum has been developed by a group of professional experts from different Regional TVET Bureaus, colleges, Industries, Institutes and universities based on the occupational standard for **Web Development and Database Administration Level I.**

The curriculum development process has been actively supported and facilitated by **Ministry of Labor and Skills.**

TVET-Program Design

1.1.   TVET-Program Title: Web Development and Database Administration **Level I**

1.2.   TVET-Program Description

The Program is designed to develop the necessary knowledge, skills and attitude of the trainees to the standard required by the occupation. The contents of this program are in line with the occupational standard. The Trainees who successfully completed the Program will be qualified to work as a **Web Development & Database Administration Assistant I** with competencies elaborated in the respective OS. Graduates of the program will have the required qualification to work in the **Economic Infrastructure (EIS)** sector in the field of **Web development and Database Administration.**

The prime objective of this training program is to equip the Trainees with the identified competences specified in the OS. Graduates are therefore expected to Operate Personal Computer, Connect Hardware Peripherals, Install Software Application, Protect Application or System Software, Maintain Inventories of Hardware and Software and Documentation, Operate word-processing applications, Operate Spreadsheet Application, Create a simple markup language document, Access and Use Database Application and Apply 5S Procedures. in accordance with the performance criteria and evidence guide described in the OS.

1.3.   TVET-Program Training Outcomes

The expected outputs of this program are the acquisition and implementation of the following units of competences:

EIS WDDBA1 01 1221   Operate Personal Computer

EIS WDDBA1 02 1221   Connect Hardware Peripherals

EIS WDDBA1 03 1221   Install Software Application

EIS WDDBA1 04 1221   Protect Application or System Software

EIS   WDDBA1051221   Maintain   Inventories   of   Hardware   and   Software   and
                                                                 Documentation

EIS WDDBA1 06 1221   Operate word-processing applications

EIS WDDBA1 07 1221   Operate Spreadsheet Application

EIS WDDBA1 08 1221   Create a simple markup language document

EIS WDDBA1 09 1221   Access and Use Database Application

EIS WDDBA1 10 1221 Apply 5S Procedures

1.4.   Duration of the TVET-Program

The Program will have duration of **480** *hours* including the on school/ Institution training and on-the-job practice or cooperative training time. Such cooperative training based on realities of the industry, nature of the occupation, location of the TVET institution, and other factors will be considered in the training delivery to ensure that trainees acquire practical and workplace experience.

S.No	Unit competency	TVET Institution training		Cooperative training	Total hours	Remarks
		Theory	Practical			
1.	Apply 5S Procedures	10	20	10	**40**	
2.	Connect Hardware Peripherals	8	32	12	**52**	
3.	Operate Personal Computer	15	35	10	**60**	
4.	Install Software Application	10	20	10	**40**	
5.	Protect Application or System Software	4	16	10	**30**	
6.	Operate word-processing applications	8	24	8	**40**	
7.	Operate Spreadsheet Application	8	32	8	**48**	
8.	Access and Use Database Application	20	40	10	**70**	
9.	Maintain Inventories of Hardware and Software and Documentation	5	20	5	**30**	
10.	Create a simple markup language document	20	40	10	**70**	

1.5. Qualification Level and Certification

Based on the descriptors elaborated on the Ethiopian National TVET Qualification Framework (NTQF) the qualification of this specific TVET Program is Level I**.**

The trainee can exit after successfully completing the modules in one level and will be awarded the equivalent institutional certificate on the level completed. However, only institutional certificate of training accomplishment will be awarded.

1.6. Target Groups

Any citizen **with or without disability** who meets the entry requirements under items 1.7 and capable of participating in the training activities is entitled to take part in the Program.

1.7 Entry Requirements

The prospective participants of this program are required to possess the requirements or directive of the **Ministry of Labor and Skills**.

1.8 Mode of Delivery

This TVET-Program is characterized as a formal Program on middle level technical skills. The mode of delivery is co-operative training. The time spent by the trainees in the real work place/ industry will give them enough exposure to the actual world of work and enable them to get hands-on experience.

The co-operative approach will be supported with school-based lecture-discussion, simulation and actual practice. These modalities will be utilized before the trainees are exposed to the industry environment.

Hence based on the nature of the occupation, location of the TVET institutions, and interest of the industry alternative mode of cooperative training such as apprenticeships, internship and traineeship will be employed. In addition, in the areas where industry is not sufficiently available the established production and service centers/learning factories in TVET institutions will be used as cooperative training places. The Training-Institution and identified companies have forged an agreement to co-operate with regard to the implementation of this program.

1.9. TVET-Program Structure

Unit of Competence		Module Code & Title		Training Outcomes	Duration (In Hours)
EIS WDDBA1 10 1221	Apply 5S Procedures	EIS WDDBA1 M01 0322	Applying 5S Procedures	• Prepare for work • Sort items • Set all items in order • Perform shine activities • Standardize 5S • Sustain 5S	40
EIS WDDBA1 02 1221	Connect Hardware Peripherals	EIS WDDBA1 M02 0322	Connecting Hardware Peripherals	• Confirm requirements of client • Obtain required peripherals • Connect hardware peripherals • Connect workstation to the internet	52
EIS WDDBA1 01 1221	Operate Personal Computer	EIS WDDBA1 M03 0322	Operating Personal Computer	• Start the computer • Access basic system information • Navigate and Manipulate desktop environment • Organize basic directory/ folder • structure and Files • Organize files for user and/or organization requirements • Printer installing	60

EIS WDDBA1 03 1221	Install Software Application	EIS WDDBA1 M04 0322	Installing Software Application	• Determine software and upgrade requirements • Obtain software or software upgrade • Install or upgrade software	40
EIS WDDBA1 04 1221	Protect Application or System software	EIS WDDBA1 M05 0322	Protecting Application or System software	• Ensure user accounts are controlled • Detect and remove destructive software • Identify and take action to stop spam • Perform workplace duties following written notices	30
EIS WDDBA1 06 1221	Operate word-processing applications	EIS WDDBA1 M06 0322	Operating word-processing applications	• Apply OHS practices • Create documents • Customize basic settings to meet page layout conventions • Format documents • Create tables • Add images • Print documents	40
EIS WDDBA1 07 1221	Operate Spreadsheet Application	EIS WDDBA1 M07 0322	Operating Spreadsheet Application	• Create spreadsheets • Customize basic settings • Format spreadsheet • Incorporate object and chart in spreadsheet • Print spreadsheet	48
EIS WDDBA1 09 1221	Access and Use Database Application	EIS WDDBA1 M08 0322	Accessing and Use Database Application	• Create database objects • Add record on table	70

				• Customize basic settings	
EIS WDDBA1 05 1221	Maintain Inventories of Hardware and Software and Documentation	EIS WDDBA1 M09 0322	Maintaining Inventories of Hardware and Software and Documentation	• Document and update inventory • Store technical documentation • Assess quality of receive articles	30
EIS WDDBA1 08 1221	Create a simple markup language document	EIS WDDBA1 M10 0322	Creating a simple markup language document	• Review requirements • Create document structure • Validate documents	70

*The time duration (Hours) indicated for the module should include all activities in and out of the TVET institution.

1.10 Institutional Assessment

Two types of evaluation will be used in determining the extent to which training outcomes are achieved. The specific training outcomes are stated in the modules. In assessing them, verifiable and observable indicators and standards shall be used.

The *formative assessment* is incorporated in the training modules and form part of the training process. Formative evaluation provides the trainee with feedback regarding success or failure in attaining training outcomes. It identifies the specific training errors that need to be corrected, and provides reinforcement for successful performance as well. For the teacher, formative evaluation provides information for making instruction and remedial work more effective.

Summative Evaluation the other form of evaluation is given when all the modules in the program have been accomplished. It determines the extent to which competence have been achieved. And, the result of this assessment decision shall be expressed in the term of institutional Assessment implementation guidelines..

Techniques or tools for obtaining information about trainees' achievement include oral or written test, demonstration and on-site observation.

1.11 TVET Teachers Profile

The teachers conducting this particular TVET Program are **B Level** and above who have satisfactory practical experiences or equivalent qualifications.

<table>
<tr><td colspan="3" align="center">LEARNING MODULE 01</td></tr>
<tr><td colspan="3">TVET-PROGRAMME TITLE: Web development and database administration Level I</td></tr>
<tr><td colspan="3">MODULE TITLE: Applying 5s procédures</td></tr>
<tr><td colspan="3">MODULE CODE: <u>EIS WDDBA1 MO1 0322</u></td></tr>
<tr><td colspan="3">NOMINAL DURATION: 40 Hours</td></tr>
<tr><td colspan="3">MODULE DESCRIPTION: This module covers the knowledge, skills and attitude required to apply 5S techniques to his/her workplace. It covers responsibility for the day-to-day operations of the workplace and ensuring that continuous improvements of Kaizen elements are initiated and institutionalized.</td></tr>
<tr><td colspan="3">LEARNING OUTCOMES

At the end of the module the trainee will be able to:

LO1. Prepare for work.

LO2. Sort items.

LO3. Set all items in order.

LO4. Perform shine activities.

LO5. Standardize 5S.

LO6. Sustain 5S.</td></tr>
<tr><td colspan="3">MODULE CONTENTS:

LO1. Prepare for work

    1.1. Using work instructions to determine job requirements

    1.2. Reading and interpreting job specifications

    1.3. Observing OHS requirements throughout the work

    1.4. Preparing and using 5s tools and equipment

    1.5. Identify and checking safety equipment and tools

    1.6. Preparing and using kaizen board

LO2. Sort items

    2.1 Preparing plan for sort activities

    2.2 Performing cleaning activities

    2.3 Identifying all items in appropriate procedure

    2.4 Listing necessary & unnecessary items in an appropriate format.</td></tr>
</table>

2.5 Using red tag strategy

2.6 Evaluating and placing unnecessary items appropriately

2.7 Recording and quantifying necessary items in appropriate formats

2.8 Reporting performance result in appropriate formats

2.9 Checking necessary items regularly in the workplace

LO3. Set all items in order

3.1 Preparing plan for set-in order activities

3.2 Performing general cleaning activities

3.3 Deciding location/layout, storage and indication methods for items

3.4 Preparing and using necessary tools and equipment for set-in order activities

3.5 Placing items in their assigned location

3.6 Returning items immediately after use

3.7 Reporting performance results using appropriate format

3.8 Checking each items regularly in its assigned location and order

LO4. Perform shine activities

4.1 Preparing plan for shine activities

    4.1.1 Cleaning schedule

    4.1.2 Inspection check list

4.2 Preparing and using necessary tools and equipment for shine activities

4.3 Implementing shine activities in appropriate procedures

4.4 Reporting performance result with appropriate formats

4.5 Conducting regular shining activities

LO5. Standardize 5S

5.1 Preparing and using plan to standardize 5s activities

5.2 Preparing and implementing tools and techniques to standardize 5s

5.3 Following checklist for standardize activities and reporting to relevant personnel.

5.4 Keeping workplace to the specified standard

5.5 Avoiding problems by standardizing activities

LO6. Sustain 5S

6.1 Preparing and following plan to sustain 5s activities

6.2 Discussing, Preparing and implementing tools and techniques to sustain 5s

6.3 Inspecting workplace regularly

6.4 Cleaning up workplace

6.5 Identifying situations and taking procedure where compliance to standards

6.6 Recommending improvements to lift the level of compliance in the workplace

6.7 Following and reporting checklist to sustain activities to relevant personnel

6.8 Avoiding problems by sustaining activities

Learning Methods:				
For none impaired trainees	**Reasonable Adjustment for Trainees with Disability (TWD)**			
	Low Vision	**Deaf**	**Hard of hearing**	**Physical impairment**
Lecture-discussion	❖ Provide large print text ❖ Prepare the lecture in **Audio/video** ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text ❖ Make sure the luminosity of the light of class room is kept ❖ Use normal tone of voice ❖ Encourage trainees to record the lecture in audio format ❖ Provide Orientation on the physical feature of the work shop ❖ Summarize main points	❖ Assign sign language interpreter ❖ Arrange the class room seating to be conducive for eye to eye contact ❖ Make sure the luminosity of the light of class room is kept ❖ Introduce new and relevant vocabularies ❖ Use short and clear sentences ❖ Give emphasis on visual lecture and ensure the attention of the trainees ❖ Avoid movement during lecture time ❖ Present the lecture in video format ❖ Summarize main points	❖ Organize the class room seating arrangement to be accessible to trainees ❖ Speak loudly ❖ Ensure the attention of the trainees ❖ Present the lecture in video format ❖ Ensure the attention of the trainees	❖ Organize the class room seating arrangement to be accessible for wheelchairs users. ❖ Facilitate and support the trainees who have severe impairments on their upper limbs to take note ❖ Provide Orientation on the physical feature of the work shop

Demonstration	❖ Conduct close follow up
	❖ Use verbal description
	❖ Provide special attention in the process of guidance
	❖ facilitate the support of peer trainees
	❖ Prepare & use simulation
		❖ use Sign language interpreter
		❖ Use video recorded material
		❖ Ensure attention of the trainees
		❖ Provide structured training
		❖ Show clear and short method
		❖ Use gesture
		❖
		  rovide tutorial support
		  (if necessary)
			❖ Illustrate in clear & short method
			❖ Use Video recorded material
			❖ Ensure the attention of the trainees
			❖
			  rovide tutorial support
			  (if necessary)
				❖ Facilitate and support the trainees having severe upper limbs impairment to operate equipment's/ machines
				❖ Assign peer trainees to assist
				❖ Conduct close follow up
				❖
				  rovide tutorial support
				  (if necessary

Group discussion	❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Brief the thematic issues of the work	❖ Use sign language interpreters ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member	❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Inform the group	❖ Introduce the trainees with their peers

			members to speak loudly	
Exercise	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training ❖ Introduce new and relevant vocabularies	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/ practical training	❖ Assign peer trainees ❖ Use additional nominal hours if necessary
Individual assignment	❖ prepare the assignment questions in large text ❖ Encourage the trainees to prepare and submit the assignment in large texts ❖ Make available recorded assignment questions ❖ Facilitate the trainees to prepare and submit the assignment in soft or hard copy	❖ Use sign language interpreter ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	

ASSESSMENT METHODS:

Interview		❖ Use sign language interpreter ❖ Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter ❖ Use short and clear questioning ❖ Time extension	❖ Speak loudly ❖ Using sign language interpreter if necessary	❖ Use written response as an option for the trainees having speech challenges
Written test	❖ Prepare the exam in large texts ❖ Use interview as an option if necessary ❖ Prepare the exam in audio format ❖ Assign human reader ❖ (if necessary) ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers ❖ Avoid essay writing ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, true or false, matching and short answers if necessary.	❖ Use oral response as an option to give answer for trainees having severe upper limb impairment ❖ Time extension for trainees having severe upper limb impairment
Demonstration /Observation	❖ Brief the instruction or provide them in large text ❖ Time extension	❖ Use sign language interpreter ❖ Brief on the instruction of the exam ❖ Provide activity-based/ practical assessment method ❖ Time extension	❖ Provide activity based assessment ❖ Brief on the instruction of the exam ❖ Use loud voice ❖ Time extension	❖ Provide activity based assessment ❖ Conduct close follow up ❖ Time extension

ASSESSMENT CRITERIA:

LO.1 Prepare for work

- Work instructions are used to determine job requirements, including method, material and equipment.
- Job specifications are read and interpreted following working manual.
- OHS requirements, including dust and fume collection, breathing apparatus and eye and ear personal protection needs are observed throughout the work.
- Tools and equipment are prepared and used to implement 5S.
- Safety equipment and tools are identified and checked for safe and effective operation.
- Kaizen Board (Visual Management Board) is prepared and used in harmony with different workplace contexts.

LO.2 Sort items

- Plan is prepared to implement sorting activities.
- Cleaning activities are performed.
- All items in the workplace are identified following the appropriate procedures.
- Necessary and unnecessary items are listed using the appropriate format.
- Red tag strategy is used for unnecessary items.
- Unnecessary items are evaluated and placed in an appropriate place other than the workplace.
- Necessary items are recorded and quantified using appropriate format.
- Performance results are reported using appropriate formats.
- Necessary items are regularly checked in the workplace.

LO.3 Set all items in order

- Plan is prepared to implement set in order activities.
- General cleaning activities are performed.
- Location/Layout, storage and indication methods for items are decided.
- Necessary tools and equipment are prepared and used for setting in order activities.
- Items are placed in their assigned locations.
- After use, the items are immediately returned to their assigned locations.

- Performance results are reported using appropriate formats.
- Each item is regularly checked in its assigned location and order.

LO.4 Perform shine activities

- Plan is prepared to implement shine activities.
- Necessary tools and equipment are prepared and used for shinning activities.
- Shine activity is implemented using appropriate procedures.
- Performance results are reported using appropriate formats.
- Regular shining activities are conducted.

LO.5 Standardize 5S

- Plan is prepared and used to standardize 5S activities.
- Tools and techniques to standardize 5S are prepared and implemented based on relevant procedures.
- Checklists are followed for standardize activities and reported to relevant personnel.
- The workplace is kept to the specified standard.
- Problems are avoided by standardizing activities.

LO.6 Sustain 5S

- Plan is prepared and followed to sustain 5S activities.
- Tools and techniques to sustain 5S are discussed, prepared and implemented based on relevant procedures.
- Workplace is inspected regularly for compliance to specified standard and sustainability of 5S techniques.
- Workplace is cleaned up after completion of job and before commencing next job or end of shift.
- Situations are identified where compliance to standards is unlikely and actions specified in procedures are taken.
- Improvements are recommended to lift the level of compliance in the workplace.
- Checklists are followed to sustain activities and report to relevant personnel.
- Problems are avoided by sustaining activities.

Annex: Resource Requirements

Module code		Module title		
EIS WDDBA1 MO1 0322		**Applying 5s procedures**		
Item No.	**Category/Item**	**Description/ Specifications**	**Quantity**	**Recommended Ratio (Item: Trainee)**
A.	*Learning Materials*			
1.	TTLM	TTTLM prepared by the trainer	25	1:1
2.	Reference Books	If available	25	1:1
Learning Facilities & Infrastructure				
1.	Lecture Room	8x12m; equipped with IT equipment and internet	1	1:25
2.	Library	- Multipurpose standard with audio visual	1	1:25
Consumable Materials				
1.	Stationery	Whiteboard marker, printing paper, printer	25	1:1
2	Clean cloth	lint free cloth	25	1:25
3	Cleaning alcohol	Denatured	2	Per section
4	Dust blower	Colt 220V	2	Per section

LEARNING MODULE 02
TVET-PROGRAMME TITLE: Web Development and Database Administration **Level I**
MODULE TITLE: Connecting hardware peripherals
MODULE CODE: EIS WDDB1 M02 0322
NOMINAL DURATION: 52 Hours
MODULE DESCRIPTION: This module describes defines the competence required to connect hardware peripherals according to instructions and a workstation or networked computer to the internet.
LEARNING OUTCOMES   At the end of the module the trainee will be able to: **LO1**. Confirm requirements of client   **LO2**. Obtain required peripherals   **LO3**. Connect hardware peripherals   **LO4**. Connect workstation to the internet

MODULE CONTENTS:
 	
 LO1. Confirm Requirements of Client
 	
     1.1 Introduction to computer
 	
         1.1.1   Understanding history, generation and types of computers
 	
         1.1.2   Identifying and categorizing internal and external hardware components
 	
         1.1.3   Identifying and categorizing computer software
 	
     1.2 Help desk and maintenance practices
 	
     1.3 Organizational guidelines relating to external suppliers and vendors
 	
     1.4 Identifying and confirming client's peripherals requirements
 	
     1.5 Documenting and reporting client requirements
 	
     1.6 Verifying client requirements
 	
     1.7 Taking action to ensure client support expectations
 	
         1.7.1   Vendor Warranty
 	
         1.7.2   Support Services
 	
 LO2. Create document structure
 	
   2.1 Obtaining peripherals
 	
   2.2 Entering peripherals into equipment inventory

2.3 Validating contents of delivered components and matching the packing list

2.4 Storing Peripherals according to vendor/manual guidelines

LO3. **Connect hardware peripherals**

3.1 Considering environmental and OHS standard

3.2 Verifying timeframe for installation

3.3 Removing and/or replacing old peripherals

3.4 Connecting new peripherals

3.5 Configuring operating system to accept the new peripherals

3.6 Testing and confirming hardware peripherals

LO4. **Connect a workstation to the internet**

4.1 Selecting and creating communication with ISP and telecom service organizations

4.2 Understanding ISP's varying plans, technologies and services they offer

4.3 Connecting workstations to the internet

4.4 Launching internet browser software

Learning Methods:				
For none impaired trainees	**Reasonable Adjustment for Trainees with Disability (TWD)**			
	Low Vision	**Deaf**	**Hard of hearing**	**Physical impairment**
Lecture-discussion	❖ Provide large print text ❖ Prepare the lecture in **Audio/video** ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text ❖ Make sure the luminosity of the light of class room is kept ❖ Use normal tone of voice ❖ Encourage trainees to record the lecture in audio format ❖ Provide Orientation on the physical feature of the work shop ❖ Summarize main points	❖ Assign sign language interpreter ❖ Arrange the class room seating to be conducive for eye to eye contact ❖ Make sure the luminosity of the light of class room is kept ❖ Introduce new and relevant vocabularies ❖ Use short and clear sentences ❖ Give emphasis on visual lecture and ensure the attention of the trainees ❖ Avoid movement during lecture time ❖ Present the lecture in video format	❖ Organize the class room seating arrangement to be accessible to trainees ❖ Speak loudly ❖ Ensure the attention of the trainees ❖ Present the lecture in video format ❖ Ensure the attention of the trainees	❖ Organize the class room seating arrangement to be accessible for wheelchairs users. ❖ Facilitate and support the trainees who have severe impairments on their upper limbs to take note ❖ Provide Orientation on the physical feature of the work shop

		❖ Summarize main points		
Demonstration	❖ Conduct close follow up ❖ Use verbal description ❖ Provide special attention in the process of guidance ❖ facilitate the support of peer trainees ❖ Prepare & use simulation	❖ use Sign language interpreter ❖ Use video recorded material ❖ Ensure attention of the trainees ❖ Provide structured training ❖ Show clear and short method ❖ Use gesture ❖ rovide tutorial support (if necessary)	❖ Illustrate in clear & short method ❖ Use Video recorded material ❖ Ensure the attention of the trainees ❖ rovide tutorial support (if necessary)	❖ Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines ❖ Assign peer trainees to assist ❖ Conduct close follow up ❖ rovide tutorial support (if necessary
Group discussion	❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Brief the thematic issues of the work	❖ Use sign language interpreters ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member	❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member	❖ Introduce the trainees with their peers

			❖ Inform the group members to speak loudly	
Exercise	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training ❖ Introduce new and relevant vocabularies	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/ practical training	❖ Assign peer trainees ❖ Use additional nominal hours if necessary
Individual assignment	❖ prepare the assignment questions in large text ❖ Encourage the trainees to prepare and submit the assignment in large texts ❖ Make available recorded assignment questions ❖ Facilitate the trainees to prepare and submit the assignment in soft or hard copy	❖ Use sign language interpreter ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	

ASSESSMENT METHODS:

Interview		❖ Use sign language interpreter ❖ Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter ❖ Use short and clear questioning ❖ Time extension	❖ Speak loudly ❖ Using sign language interpreter if necessary	❖ Use written response as an option for the trainees having speech challenges
Written test	❖ Prepare the exam in large texts ❖ Use interview as an option if necessary ❖ Prepare the exam in audio format ❖ Assign human reader ❖ (if necessary) ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers ❖ Avoid essay writing ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, true or false, matching and short answers if necessary.	❖ Use oral response as an option to give answer for trainees having severe upper limb impairment ❖ Time extension for trainees having severe upper limb impairment
Demonstration /Observation	❖ Brief the instruction or provide them in large text ❖ Time extension	❖ Use sign language interpreter ❖ Brief on the instruction of the exam ❖ Provide activity-based/ practical assessment method ❖ Time extension	❖ Provide activity based assessment ❖ Brief on the instruction of the exam ❖ Use loud voice ❖ Time extension	❖ Provide activity based assessment ❖ Conduct close follow up ❖ Time extension

ASSESSMENT CRITERIA:

LO.1 Confirm requirements of client

- Client peripherals are identified requirements and confirmed in accordance with organizational standards
- Client requirements and peripherals needed are documented in line with organizational standards and findings are reported to the appropriate person
- Client requirements are verified with appropriate person in line with organizational standards and reporting procedures
- Action must be taken to ensure client support expectations are covered by vendor warranty and support services

LO.2 Obtain required peripherals

- Peripherals are obtained under instruction from appropriate person
- Peripherals are entered into equipment inventory according to organizational standards
- Validate that contents of delivered components and physical contents match the packing list and resolve discrepancies, if necessary
- Peripherals are stored according to vendor/manual guidelines

LO.3 Connect hardware peripherals

- Timeframe for installation schedule is verified with the client in accordance with the organization requirements
- Old peripherals are removed and/or replaced with minimum disruption to clients taking into account environmental considerations and OHS standards
- New peripherals are connected with minimum disruption to clients and taking into account the operating system procedures
- The computer is configured to accept the new peripherals
- Hardware peripherals are tested and confirm client satisfaction, particular attention must be paid to possible impact on other systems and adjustments are made as required

LO.4 Connect workstation to the internet

- Workstations are connected to the internet through the existing internet connection and functionality confirmed
- Internet browser software is launched to enable access to the internet and functionality confirmed

Annex: Resource Requirements

	Module Code **EIS WDDB1 M02 0322**		**Module Title** **Connecting Hardware Peripherals**	
Item No.	**Category/Item**	**Description/ Specifications**	**Quantity**	**Recommended Ratio (Item: Trainee)**
A.	*Learning Materials*			
1.	TTLM	Trainer's made handouts	25	1:1
2.	Reference Books			
2.1	The Winn L. Rosch Hardware Bible	Winn L Rosch ,2003 (6th Edition)	5	1:5
2.2	A+ Guide to Managing & Maintaining Your PC	Jean Andrews 2013, 8th Edition, ISBN-13: 978-1133135081	5	1:5
2.3	Mike Meyers' CompTIA A+ Guide to Managing and Troubleshooting PCs,	Mike Meyers ,McGraw Hill; 6th edition (May 8, 2019)	5	1:5
3	Manuals and procedures	Hardware connectivity manual	5	1:5
4	Internet and virtual library	Audio visual	1	1:25
5	Journals/Publication /Magazines	ICT and hardware related Journals	5	1:5
B.	*Learning Facilities & Infrastructure*			
1.	Workshop	- 8x12m; Equipped with IT Equipment's	1	1:25

2.	Library	- Multipurpose	1	1:25
3.	White Board	1.50 X 1.50	1	1:25
4.	Internet and Virtual library	High speed Internet Connection	1	1:25
C.	***Consumable Materials***			
1.	Blank CD/ DVD	- R/RW	5	1:5
2.	Stationery	- Whiteboard marker, printing paper, printer ink	-	-
3.	Connectors	Terminals, converters, splitters	250	10:1
D.	***Tools and Equipment's***			
1.	Computer	• At least 80 GB, 3.4Ghz, P IV With Expandability	25	1:1
2.	UPS	750 Volt Ampere	13	1:2
3.	Divider	American socket supporter	13	1:2
4.	Multimedia projector	- LCD	1	1:25
5.	Printer	Laser Jet	1	1:25
6.	Network Tool Kit	Full set	5	1:5
7.	Maintenance Tool Kit	Full set	5	1:2
8.	Desk jet Printer	Color	1	1:25
9.	Video Camera	Digital	1	1:25
10.	Web Camera	Desk top fixable	5	1:5
11.	Expansion Cards	Video card, Modem Card, Network Card, TV Card	5	1:5
12.	Hard Disk	Internal HDD of any capacity SATA IDE	5	1:5
13.	Scanner	Image and Text support	1	1:25
14.	RAM	Different types	5	1:5

LEARNING MODULE 03
TVET-PROGRAMME TITLE: Web Development and Database Administration Level **I**
MODULE TITLE: Operating Personal Computer
MODULE CODE: EIS WDDBA1 M03 0322
NOMINAL DURATION: 60 Hours
MODULE DESCRIPTION: This Module defines the competence required to operate a personal computer, including starting the PC, logging in, using and understanding desktop icons and their links to underlying programs, navigating a directory structure, saving work, printing, closing down the PC and word processing.
LEARNING OUTCOMES   At the end of the module the trainee will be able to: **LO1.** Start the computer   **LO2.** Access basic system information   **LO3.** Navigate and Manipulate desktop environment   **LO4.** Organize basic directory/ folder structure and files   **LO5.** Organize files for user and/or organization requirements   **LO6.** Printer installing
MODULE CONTENTS:

LO1. Start the computer

    1.1. Checking Peripheral device connections.

    1.2. Checking Input voltage for the device based on OHS Standards

    1.3. Switching on Power at both the power point and computer.

    1.4. Using basic input device

        1.5.1. Working with Mouse

        1.5.2. Typing Keyboard.

        1.5.3. Identifying minimum typing skills, speed and accuracy based on organizational benchmark

LO2. Access basic system information

    2.1. Inserting username and password on introductory screen

    2.2. Navigating operating system

        2.2.1. Accessing system information

        2.2.2. Identifying system configuration

      2.2.3. Identifying application versions in operation

      2.2.4. Identifying system browser

  2.3. Using On-line help functions

LO3. Navigate and Manipulate desktop environment

  3.1. Creating and customizing Desktop icons

  3.2. Selecting, opening and closing Desktop icons to access application programs

  3.3. Manipulating and returning Application windows to original conditions

LO4. Organize basic directory/ folder structure and files

  4.1. Creating and naming Directories and subdirectories

  4.2. Identifying Attributes of directories

  4.3. Moving Subdirectories between directories

  4.4. Renaming Directories

  4.5. Accessing Directories and subdirectories

LO5. Organize files for user and/or organization requirements

  5.1. Using system browser to search derives

  5.2. Accessing Most common types of files in the directories

  5.3. Selecting, opening and renaming Groups of files

  5.4. Moving Files between directories

  5.5. Copying Files to disks

  5.6. Restoring Deleted files

  5.7. Erasing and formatting Disks

LO6. Printer installing

  6.1. Adding Printers and ensuring correct printer setting

  6.2. changing Default printer

  6.3. printing Information

Learning Methods:				
For none impaired trainees	**Reasonable Adjustment for Trainees with Disability (TWD)**			
	Low Vision	**Deaf**	**Hard of hearing**	**Physical impairment**
Lecture-discussion	❖ Provide large print text ❖ Prepare the lecture in **Audio/video** ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text ❖ Make sure the luminosity of the light of class room is kept ❖ Use normal tone of voice ❖ Encourage trainees to record the lecture in audio format ❖ Provide Orientation on the physical feature of the work shop ❖ Summarize main points	❖ Assign sign language interpreter ❖ Arrange the class room seating to be conducive for eye to eye contact ❖ Make sure the luminosity of the light of class room is kept ❖ Introduce new and relevant vocabularies ❖ Use short and clear sentences ❖ Give emphasis on visual lecture and ensure the attention of the trainees ❖ Avoid movement during lecture time ❖ Present the lecture in video format	❖ Organize the class room seating arrangement to be accessible to trainees ❖ Speak loudly ❖ Ensure the attention of the trainees ❖ Present the lecture in video format ❖ Ensure the attention of the trainees	❖ Organize the class room seating arrangement to be accessible for wheelchairs users. ❖ Facilitate and support the trainees who have severe impairments on their upper limbs to take note ❖ Provide Orientation on the physical feature of the work shop

		❖ Summarize main points		
Demonstration	❖ Conduct close follow up ❖ Use verbal description ❖ Provide special attention in the process of guidance ❖ facilitate the support of peer trainees ❖ Prepare & use simulation	❖ use Sign language interpreter ❖ Use video recorded material ❖ Ensure attention of the trainees ❖ Provide structured training ❖ Show clear and short method ❖ Use gesture ❖ rovide tutorial support (if necessary)	❖ Illustrate in clear & short method ❖ Use Video recorded material ❖ Ensure the attention of the trainees ❖ rovide tutorial support (if necessary)	❖ Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines ❖ Assign peer trainees to assist ❖ Conduct close follow up ❖ rovide tutorial support (if necessary
Group discussion	❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Brief the thematic issues of the work	❖ Use sign language interpreters ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member	❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member	❖ Introduce the trainees with their peers

			❖ Inform the group members to speak loudly	
Exercise	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training ❖ Introduce new and relevant vocabularies	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/ practical training	❖ Assign peer trainees ❖ Use additional nominal hours if necessary
Individual assignment	❖ prepare the assignment questions in large text ❖ Encourage the trainees to prepare and submit the assignment in large texts ❖ Make available recorded assignment questions ❖ Facilitate the trainees to prepare and submit the assignment in soft or hard copy	❖ Use sign language interpreter ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	

ASSESSMENT METHODS:				
Interview		❖ Use sign language interpreter ❖ Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter ❖ Use short and clear questioning ❖ Time extension	❖ Speak loudly ❖ Using sign language interpreter if necessary	❖ Use written response as an option for the trainees having speech challenges
Written test	❖ Prepare the exam in large texts ❖ Use interview as an option if necessary ❖ Prepare the exam in audio format ❖ Assign human reader ❖ (if necessary) ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers ❖ Avoid essay writing ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, true or false, matching and short answers if necessary.	❖ Use oral response as an option to give answer for trainees having severe upper limb impairment ❖ Time extension for trainees having severe upper limb impairment
Demonstration /Observation	❖ Brief the instruction or provide them in large text ❖ Time extension	❖ Use sign language interpreter ❖ Brief on the instruction of the exam ❖ Provide activity-based/ practical assessment method ❖ Time extension	❖ Provide activity based assessment ❖ Brief on the instruction of the exam ❖ Use loud voice ❖ Time extension	❖ Provide activity based assessment ❖ Conduct close follow up ❖ Time extension

ASSESSMENT CRITERIA:

LO1. Start the computer

- Peripheral device connections for correct position are checked

- Input voltage for the device based on the OHS standards are checked

- Power at both the power point and computer are switched on

LO2. Access basic system information

- User name and password are inserted as prompted and noted access, privacy, security and related conditions of use displayed on introductory screens

- Operating system are navigated to access system information to identify system configuration and application versions in operation

- On-line help functions are used as required

LO3. Navigate and Manipulate desktop environment

- Desktop icons are created and customized

- Desktop icons are selected, opened and closed to access application programs

- Application windows are manipulated and desktop returned to original conditions

LO4. Organize basic directory/ folder structure and files

- Directories and subdirectories are created and named

- Attributes of directories are identified

- Subdirectories between directories are moved

- Directories as required are renamed

- Directories and subdirectories are accessed via different paths

LO5. Organize files for user and/or organization requirements

- System browser are used to search drives for specific files

- Most commonly used types of files in the directories are accessed

- Groups of files are selected, opened and renamed as required

- Files between directories are moved

- Files to disks are copied

- Deleted files are restored as necessary

- Disks are erased and formatted as necessary

LO6. Printer installing

- Printers are added if required and ensured to have correct printer settings
- Default printer are changed if appropriate
- Information is printed from an installed printer

Annex: Resource Requirements

Module code		Module title		
EIS WDDBA1 M03 0322		**Operating Personal Computer**		
Item No.	**Category/Item**	**Description/ Specifications**	**Quantity**	**Recommended Ratio (Item: Trainee)**
A.	*Learning Materials*			
1.	TTLM	• Teacher's made Guide	25	1:1
2.	Textbooks	• Any Relevant Books	25	1:1
3.	Reference Books			
3.1	Microsoft Windows Operating System Essentials	Tom Carpenter,1st edition (2012)	5	1:5
3.2	Teach Yourself VISUALLY Windows 10	Paul McFedries, 2020, 3rd Edition	5	1:5
4.	Journals/Publication/Magazines	- ICT journals(Monthly)	5	1:5
B.	*Learning Facilities & Infrastructure*			
1	Lecture Room	- 8x12m; equipped with IT equipment and internet	1	1:25
2.	Library	- Multipurpose	1	1:25
C.	*Consumable Materials*			
1.	Blank Disk	- CD-R/RW - DVD/CDRW	5	1:5
2.	Stationery	- Whiteboard marker, printing paper, printer ink	–	–
D.	**Tools and Equipment**			
1	Operating system	- Linux 7.0 or above, Windows 7 or above, Apple OS X or above	5	1:5
2	ISP Service	• Portable MODEM (4G wireless router) • Broadband	1(10MB)	1:25
3	UPS	• 750 Volt Ampère	13	1:2
4	Divider	• American socket supporter	13	1:2
5	Desktop Computer including its peripherals	- w/15 inch flat monitor and 120 GB Hard disk; RAM size 2 GB; 3Gz or above	25	1:1
6	Multimedia projector	- LCD	1	1:25
7	Printer	- Any available printer	1	1:25
8	Driver pack/printer driver	-Based on available printer & computer	1	1:25
9	Locker	- wooden or metal	2	1:13
10	Cabinet	- metal	1	1:25

LEARNING MODULE 04

TVET-PROGRAMME TITLE: Web Development and Database Administration **Level I**

MODULE TITLE: Installing Software Application

MODULE CODE: EIS WDDBA1 M04 0322

NOMINAL DURATION: 40 Hours

MODULE DESCRIPTION: This module defines the competence required to install or upgrade basic software applications using a commercial applications program.

LEARNING OUTCOMES

At the end of the module the trainee will be able to:

LO1. Determine software and upgrade requirements

LO2. Obtain software or software upgrade

LO3. Install or upgrade software

MODULE CONTENTS:

LO1. Determine software and upgrade requirements

    1.1. Documenting and reporting client requirements

    1.2. Acting on instruction to meet clients requirement in line with organizational requirements

LO2. Obtain software or software upgrade

    2.1. Investigating and selecting application program

    2.2. Obtaining application program using prescribed instruction

    2.3. Determining licensing requirements and record in line with organizational guidelines

        2.3.1   Type of license

        2.3.2   Cost of license

    2.4. Ensuring minimum hardware and operating system requirement

LO3. Install or upgrade software

    3.1 Installing or upgrading software

    3.2 Completing installation process with minimal disruption

    3.3 Carrying out testing and acceptance with corporate guidelines

    3.4 Paying particular attention to possible impact on other systems

    3.5 Ensuring client requirements satisfaction in line with the organizational standard

    3.6 Referring outstanding client issues

Learning Methods:				
For none impaired trainees	**Reasonable Adjustment for Trainees with Disability (TWD)**			
	Low Vision	**Deaf**	**Hard of hearing**	**Physical impairment**
Lecture-discussion	❖ Provide large print text ❖ Prepare the lecture in **Audio/video** ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text ❖ Make sure the luminosity of the light of class room is kept ❖ Use normal tone of voice ❖ Encourage trainees to record the lecture in audio format ❖ Provide Orientation on the physical feature of the work shop ❖ Summarize main points	❖ Assign sign language interpreter ❖ Arrange the class room seating to be conducive for eye to eye contact ❖ Make sure the luminosity of the light of class room is kept ❖ Introduce new and relevant vocabularies ❖ Use short and clear sentences ❖ Give emphasis on visual lecture and ensure the attention of the trainees ❖ Avoid movement during lecture time ❖ Present the lecture in video format	❖ Organize the class room seating arrangement to be accessible to trainees ❖ Speak loudly ❖ Ensure the attention of the trainees ❖ Present the lecture in video format ❖ Ensure the attention of the trainees	❖ Organize the class room seating arrangement to be accessible for wheelchairs users. ❖ Facilitate and support the trainees who have severe impairments on their upper limbs to take note ❖ Provide Orientation on the physical feature of the work shop

		❖ Summarize main points		
Demonstratio n	❖ Conduct close follow up ❖ Use verbal description ❖ Provide special attention in the process of guidance ❖ facilitate the support of peer trainees ❖ Prepare & use simulation	❖ use Sign language interpreter ❖ Use video recorded material ❖ Ensure attention of the trainees ❖ Provide structured training ❖ Show clear and short method ❖ Use gesture ❖ rovide tutorial support (if necessary)	❖ Illustrate in clear & short method ❖ Use Video recorded material ❖ Ensure the attention of the trainees ❖ rovide tutorial support (if necessary)	❖ Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines ❖ Assign peer trainees to assist ❖ Conduct close follow up ❖ rovide tutorial support (if necessary
Group discussion	❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Brief the thematic issues of the work	❖ Use sign language interpreters ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member	❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member	❖ Introduce the trainees with their peers

			❖ Inform the group members to speak loudly	
Exercise	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training ❖ Introduce new and relevant vocabularies	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/ practical training	❖ Assign peer trainees ❖ Use additional nominal hours if necessary
Individual assignment	❖ prepare the assignment questions in large text ❖ Encourage the trainees to prepare and submit the assignment in large texts ❖ Make available recorded assignment questions ❖ Facilitate the trainees to prepare and submit the assignment in soft or hard copy	❖ Use sign language interpreter ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	

ASSESSMENT METHODS:

Interview		❖ Use sign language interpreter ❖ Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter ❖ Use short and clear questioning ❖ Time extension	❖ Speak loudly ❖ Using sign language interpreter if necessary	❖ Use written response as an option for the trainees having speech challenges
Written test	❖ Prepare the exam in large texts ❖ Use interview as an option if necessary ❖ Prepare the exam in audio format ❖ Assign human reader ❖ (if necessary) ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers ❖ Avoid essay writing ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, true or false, matching and short answers if necessary.	❖ Use oral response as an option to give answer for trainees having severe upper limb impairment ❖ Time extension for trainees having severe upper limb impairment
Demonstration /Observation	❖ Brief the instruction or provide them in large text ❖ Time extension	❖ Use sign language interpreter ❖ Brief on the instruction of the exam ❖ Provide activity-based/ practical assessment method ❖ Time extension	❖ Provide activity based assessment ❖ Brief on the instruction of the exam ❖ Use loud voice ❖ Time extension	❖ Provide activity based assessment ❖ Conduct close follow up ❖ Time extension

ASSESSMENT CRITERIA:

LO1. Determine software and upgrade requirements

- Client requirements are documented and reported to appropriate person in accordance with the workplace standard

- Act on instructions to meet client requirements in line with organizational requirements

LO2. Obtain software or software upgrade

- Application program that best conforms to requirements and organizational policies are investigated and selected

- Application program under instruction is obtained from appropriate person

- Licensing requirements and record are determined in line with organizational guidelines

- Target computer is ensured to conform with the minimum hardware and operating system requirements of the application program

LO3. Install or upgrade software

- New or upgraded software are installed in accordance with appropriate person or organizational instructions

- Installation process is completed efficiently and effectively with minimal disruption

- Testing and acceptance are carried out in line with corporate guidelines, paying particular attention to possible impact on other systems

- Ensure client requirements are satisfied in accordance with the organizational standard

- Outstanding client issues are referred to appropriate person as necessary

Annex: Resource Requirements

	Module Code			Module Title	
	EIS WDDBA1 M04 0322			**Installing Software Application**	
Item No.	**Category/Item**	**Description/ Specifications**	**Quantity**	**Recommended Ratio (Item: Trainee)**	
A.	*Learning Materials*				
1.	TTLM	**Teachers made** • Teacher's Guide • Learning Guide • Assessment Packet	5 copies for each	1:5	
2.	Reference Books	Any Relevant Books If available	5	1:5	
B.	*Learning Facilities & Infrastructure*				
1.	Workshop	- 8x12m; equipped with networked computer, reference materials	1	1:25	
2.	Library	- Multipurpose	1	1:25	
3.	Internet	Broadband	1	1:25	
4.	White Board	1.50 X 1.50	1	1:25	
C.	*Consumable Materials*				
1.	Blank Disk	- CD-R/RW - DVD-R/RW	5	1:5	
2	Stationery	- Whiteboard marker, printing paper, printer ink	-	-	
3	Flash disk	8 GB or 16 GB	1	1:25	
D.	*Tools and Equipment's*				
1.	Laptop	Core i7, Ram 8 GB, Hard disk 1TB	25	1:1	
2	Software	Office software, Antivirus software & operating system (Windows 7 or above)	25	1:1	
3	UPS	1000 Volt Amper	13	1:2	
4	Divider	American socket supporter	13	1:2	
5	Projector	- LCD	1	1:25	
6	Printer	Any	1	1:25	

| | LEARNING MODULE 05 | |

| **TVET-PROGRAMME TITLE**: Web Development and Database Administration **Level I** |

| **MODULE TITLE:** Protecting Application or System Software |

| **MODULE CODE**: EIS WDDBA1 M05 0322 |

| **NOMINAL DURATION: 30 Hours** |

| **MODULE DESCRIPTION**: This module defines the competence required to keep application or system software working effectively. It includes detecting and removing destructive software |

| **LEARNING OUTCOMES**

At the end of the module the trainee will be able to:

LO1. Ensure user accounts are controlled

LO2. Detect and remove destructive software

LO3. Identify and take action to stop spam

LO4. Perform workplace duties following written notices |

| **MODULE CONTENTS:**

LO1. Ensure user accounts are controlled

    1.1.   Modifying default user settings to conform security policy

    1.2.   Modifying previously created user settings to update security policy

    1.3.   Ensuring legal notices displayed at logon

    1.4.   Using appropriate utilities to check strength of passwords and its complexity rules

    1.5.   Accessing information service

          1.5.1. Identifying security gaps

          1.5.2. Taking appropriate action using hardware and software or patches

LO2. Detect and remove destructive software

    2.1   Defining and identifying common types of destructive software

    2.2   Selecting and installing virus protection and scheduling compatible with current operating system

    2.3   Describing advanced systems of protection

    2.4   Establishing maintenance practices

    2.5   Installing software updates on a regular basis

    2.6   Configuring software security settings to prevent from infecting computer

    2.7   Running and/or scheduling virus protection software |

2.8	Reporting detected destructive software
2.9	Removing destructive software

LO3. Identify and take action to stop spam

3.1   Defining and identifying common types of spam

3.2   Taking Appropriate action to protect unauthorized access of spammers

3.3   Configuring and using Spam filters

3.4   Reporting and documenting Spams to identify the security threats and perform recommended action

LO4. Perform workplace duties following written notices

4.1   Reading and interpreting written notices and instructions in accordance with organizational guidelines

4.2   Following routine written instruction in sequence

4.3   Giving feedback to workplace supervisor

Learning Methods:				
For none impaired trainees	Reasonable Adjustment for Trainees with Disability (TWD)			
	Low Vision	**Deaf**	**Hard of hearing**	**Physical impairment**
Lecture-discussion	❖ Provide large print text ❖ Prepare the lecture in **Audio/video** ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text ❖ Make sure the luminosity of the light of class room is kept ❖ Use normal tone of voice ❖ Encourage trainees to record the lecture in audio format ❖ Provide Orientation on the physical feature of the work shop ❖ Summarize main points	❖ Assign sign language interpreter ❖ Arrange the class room seating to be conducive for eye to eye contact ❖ Make sure the luminosity of the light of class room is kept ❖ Introduce new and relevant vocabularies ❖ Use short and clear sentences ❖ Give emphasis on visual lecture and ensure the attention of the trainees ❖ Avoid movement during lecture time ❖ Present the lecture in video format	❖ Organize the class room seating arrangement to be accessible to trainees ❖ Speak loudly ❖ Ensure the attention of the trainees ❖ Present the lecture in video format ❖ Ensure the attention of the trainees	❖ Organize the class room seating arrangement to be accessible for wheelchairs users. ❖ Facilitate and support the trainees who have severe impairments on their upper limbs to take note ❖ Provide Orientation on the physical feature of the work shop

		❖ Summarize main points		
Demonstratio n	❖ Conduct close follow up ❖ Use verbal description ❖ Provide special attention in the process of guidance ❖ facilitate the support of peer trainees ❖ Prepare & use simulation	❖ use Sign language interpreter ❖ Use video recorded material ❖ Ensure attention of the trainees ❖ Provide structured training ❖ Show clear and short method ❖ Use gesture ❖ rovide tutorial support (if necessary)	❖ Illustrate in clear & short method ❖ Use Video recorded material ❖ Ensure the attention of the trainees ❖ rovide tutorial support (if necessary)	❖ Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines ❖ Assign peer trainees to assist ❖ Conduct close follow up ❖ rovide tutorial support (if necessary
Exercise	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training ❖ Introduce new and relevant vocabularies	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/ practical training	❖ Assign peer trainees ❖ Use additional nominal hours if necessary

Individual assignment	❖ prepare the assignment questions in large text ❖ Encourage the trainees to prepare and submit the assignment in large texts ❖ Make available recorded assignment questions ❖ Facilitate the trainees to prepare and submit the assignment in soft or hard copy	❖ Use sign language interpreter ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	

ASSESSMENT METHODS:				
Interview		❖ Use sign language interpreter ❖ Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter ❖ Use short and clear questioning ❖ Time extension	❖ Speak loudly ❖ Using sign language interpreter if necessary	❖ Use written response as an option for the trainees having speech challenges
Written test	❖ Prepare the exam in large texts ❖ Use interview as an option if necessary ❖ Prepare the exam in audio format ❖ Assign human reader ❖ (if necessary) ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers ❖ Avoid essay writing ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, true or false, matching and short answers if necessary.	❖ Use oral response as an option to give answer for trainees having severe upper limb impairment ❖ Time extension for trainees having severe upper limb impairment
Demonstration /Observation	❖ Brief the instruction or provide them in large text ❖ Time extension	❖ Use sign language interpreter ❖ Brief on the instruction of the exam ❖ Provide activity-based/ practical assessment method ❖ Time extension	❖ Provide activity based assessment ❖ Brief on the instruction of the exam ❖ Use loud voice ❖ Time extension	❖ Provide activity based assessment ❖ Conduct close follow up ❖ Time extension

ASSESSMENT CRITERIA:

LO1. Ensure user accounts are controlled

- Modify default user settings to ensure that they conform to security policy
- Previously created user settings are modified to ensure they conform to updated security policy
- Ensure legal notices displayed at logon are appropriate
- Appropriate utilities are used to check strength of passwords and consider tightening rules for password complexity
- Information services are accessed to identify security gaps and take appropriate action using hardware and software or patches

LO2. Detect and remove destructive software

- Common types of destructive software are defined and identified
- Virus protection compatible with the operating system in use are selected and installed
- Advanced systems of protection are described in order to understand further options
- Software updates on a regular basis are installed
- Software security settings are configured to prevent destructive software from infecting computer
- Virus protection software are run and/or scheduled on a regular basis
- Detected destructive software are reported to appropriate person and remove the destructive software

LO3. Identify and take action to stop spam

- Common types of spam are defined and identified
- Appropriate action is taken in order to protect unauthorized access of spammers
- Spam filters are configured and used
- Spams are reported and documented to identify the security threats and be able to perform recommended action

LO4. Perform workplace duties following written notice

- Written notices and instructions are read and interpreted correctly in accordance with organizational guidelines
- Routine written instruction are followed in sequence
- Feedback is given to workplace supervisor based on the instructions/information received

Module Code		Module title		
EIS WDDBA1 M05 0322		**Protecting Application or System Software**		
Item No.	**Category/Item**	**Description/ Specifications**	**Quantity**	**Recommended Ratio (Item: Trainee)**
A.	*Learning Materials*			
1.	TTLM	**Teachers made** • Teacher's Guide • Learning Guide • Assessment Packet	5 copies for each	1:5
2.	Reference Books	Any Relevant Books If available		
2.1	Computer Security A Hands-on Approach	Wenliang Du, 2017	25	1:5
2.2	The Art of Software Security Assessment Identifying and Preventing Software Vulnerabilities - Common	John McDonald ,Mark Dowd and Justin Schuh	25	1:5
B.	*Learning Facilities & Infrastructure*			
1.	Workshop	- 8x12m; equipped with networked computer, reference materials	1	1:25
2.	Library	- Multipurpose	1	1:25
3.	Internet	Broadband	1	1:25
4.	White Board	1.50 X 1.50	1	1:25
C.	*Consumable Materials*			
1.	CD/DVD	- R/RW	5	1:5
2	Stationery	- Whiteboard marker, printing paper, printer ink	–	–
3	Flash disk	4 GB or 8 GB	1	1:25
D.	*Tools and Equipment's*			

1.	Laptop	Core i7, Ram 8 GB, Hard disk 1TB	1	1
2	Basic computer maintenance Tool kit	Screw(set), wrist pad, anti-electro static mat, anti-electro static bag	10	1:3
3	Software	Office software, Antivirus software & operating system (Windows 7 or above) or Linux	25	1:1
4	UPS	1000 Volt Amper	13	1:2
5	Divider	Standard	13	1:2
6	Projector	- LCD	1	1:25
7	Printer	Any	1	1:25

TVET-PROGRAMME TITLE: Web Development and Database Administration **Level I**
MODULE TITLE: Operating Word- Processing Application
MODULE CODE: EIS WDDBA1 M06 0322
NOMINAL DURATION: 40 Hours
MODULE DESCRIPTION: This Modules describes the performance outcomes, skills and knowledge required to operate word-processing applications and perform basic operations, including creating and formatting documents, creating tables and printing labels.
LEARNING OUTCOMES

At the end of the module the trainee will be able to:

LO1. Apply OHS practices

LO2. Create documents

LO3. Customize basic settings to meet page layout conventions

LO4. Format documents

LO5. Create tables

LO6. Add images

LO7. Print documents

MODULE CONTENTS:

LO1. Apply OHS practices

    1.1. Identifying ergonomic strategies

    1.2. Using workplace ergonomic work practices

    1.3. Organizing work area to ensure an ergonomic work environment

LO2. Create documents

    2.1 Purpose, use and function of word-processing software

    2.2 Identifying information requirements

    2.3 Opening word-processing application

    2.4 Creating and opening document.

    2.5 Using document templates as required

    2.6 Adding data and using simple formatting tools

    2.7 Saving document to directory

LO3. Customize basic settings to meet page layout conventions

3.1 Adjusting page layout to meet information requirements

3.2 Opening and viewing different toolbars

3.3 Changing font format

3.4 Changing alignment and line spacing

3.5 Modifying margins

3.6 Opening and switching between several documents

LO4. Format documents

4.1 Using formatting features and styles

4.2 Highlighting and copying text from multiple documents

4.3 Inserting headers and footers to incorporate necessary data

4.4 Saving document in another file format

4.5 Saving and closing document to *a* storage device

LO5. Create tables

5.1. Inserting standard table into document

5.2. Changing cells to meet information requirements

5.3. Inserting and deleting columns and rows as necessary

5.4. Using formatting tools according to style requirements

LO6. Add images

6.1 Inserting images and customizing it appropriately in the document

6.2 Positioning and resizing images to meet document formatting needs.

6.3 Creating mail merge

6.4 Adding Images and using mail merge

LO7. Print documents

7.1 Previewing document in print preview mode

7.2 Selecting basic print settings

7.3 Printing document or part of document from printer

Learning Methods:				
For none impaired trainees	**Reasonable Adjustment for Trainees with Disability (TWD)**			
	Low Vision	**Deaf**	**Hard of hearing**	**Physical impairment**
Lecture-discussion	❖ Provide large print text ❖ Prepare the lecture in **Audio/video** ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text ❖ Make sure the luminosity of the light of class room is kept ❖ Use normal tone of voice ❖ Encourage trainees to record the lecture in audio format ❖ Provide Orientation on the physical feature of the work shop ❖ Summarize main points	❖ Assign sign language interpreter ❖ Arrange the class room seating to be conducive for eye to eye contact ❖ Make sure the luminosity of the light of class room is kept ❖ Introduce new and relevant vocabularies ❖ Use short and clear sentences ❖ Give emphasis on visual lecture and ensure the attention of the trainees ❖ Avoid movement during lecture time ❖ Present the lecture in video format ❖ Summarize main points	❖ Organize the class room seating arrangement to be accessible to trainees ❖ Speak loudly ❖ Ensure the attention of the trainees ❖ Present the lecture in video format ❖ Ensure the attention of the trainees	❖ Organize the class room seating arrangement to be accessible for wheelchairs users. ❖ Facilitate and support the trainees who have severe impairments on their upper limbs to take note ❖ Provide Orientation on the physical feature of the work shop
Demonstration	❖ Conduct close follow up ❖ Use verbal description ❖ Provide special attention in the process of guidance ❖ facilitate the support of peer trainees ❖ Prepare & use simulation	❖ use Sign language interpreter ❖ Use video recorded material ❖ Ensure attention of the trainees ❖ Provide structured training ❖ Show clear and short method ❖ Use gesture ❖ rovide tutorial support (if necessary)	❖ Illustrate in clear & short method ❖ Use Video recorded material ❖ Ensure the attention of the trainees ❖ rovide tutorial support (if necessary)	❖ Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines ❖ Assign peer trainees to assist ❖ Conduct close follow up ❖ rovide tutorial support (if necessary

Group discussion	❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Brief the thematic issues of the work	❖ Use sign language interpreters ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member	❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Inform the group members to speak loudly	❖ Introduce the trainees with their peers
Exercise	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training ❖ Introduce new and relevant vocabularies	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/ practical training	❖ Assign peer trainees ❖ Use additional nominal hours if necessary
Individual assignment	❖ prepare the assignment questions in large text ❖ Encourage the trainees to prepare and submit the assignment in large texts ❖ Make available recorded assignment questions ❖ Facilitate the trainees to prepare and submit the assignment in soft or hard copy	❖ Use sign language interpreter ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	

ASSESSMENT METHODS:

Interview		❖ Use sign language interpreter ❖ Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter ❖ Use short and clear questioning ❖ Time extension	❖ Speak loudly ❖ Using sign language interpreter if necessary	❖ Use written response as an option for the trainees having speech challenges
Written test	❖ Prepare the exam in large texts ❖ Use interview as an option if necessary ❖ Prepare the exam in audio format ❖ Assign human reader ❖ (if necessary) ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers ❖ Avoid essay writing ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, true or false, matching and short answers if necessary.	❖ Use oral response as an option to give answer for trainees having severe upper limb impairment ❖ Time extension for trainees having severe upper limb impairment
Demonstration /Observation	❖ Brief the instruction or provide them in large text ❖ Time extension	❖ Use sign language interpreter ❖ Brief on the instruction of the exam ❖ Provide activity-based/ practical assessment method ❖ Time extension	❖ Provide activity based assessment ❖ Brief on the instruction of the exam ❖ Use loud voice ❖ Time extension	❖ Provide activity based assessment ❖ Conduct close follow up ❖ Time extension

ASSESSMENT CRITERIA:

LO1. Apply OHS practices

- Use workplace ergonomic work practices and strategies
- Organize work area ensuring an ergonomic work environment

LO2. Create documents

- Open word-processing application, create document and add data according to information requirements
- Use document templates as required
- Use simple formatting tools when creating the document
- Save document to director

LO3. Customize basic settings to meet page layout conventions

- Adjust page layout to meet information requirements
- Open and view different toolbars
- Change font format to suit the purpose of the document
- Change alignment and line spacing according to document information requirements
- Modify margins to suit the purpose of the document
- Open and switch between several documents

LO4. Format documents

- Use formatting features and styles as required
- Highlight and copy text from another area in the document or from another active document
- Insert headers and footers to incorporate necessary data
- Save document in another file format
- Save and close document to a storage device

LO5. Create tables

- Insert standard table into document
- Change cells to meet information requirements
- Insert and delete columns and rows as necessary

- Use formatting tools according to style requirements

LO6. Add images

- Insert appropriate images into document and customize as necessary

- Position and resize images to meet document formatting needs

- Images and use mail merge are added

LO7. Print documents

- Preview document in print preview mode

- Select basic print settings

- Print document or part of document from printer

Annex: Resource Requirements

Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Trainee)
	Module code **EIS WDDBA1 M06 0322**		Module title **Operating word processing**	
A.	*Learning Materials*			
1.	TTLM	Teacher's made		
		• Learning Guide	25	1:1
		• Teacher Guide	1	
		• Assessment Packet	25	1:1
2.	Textbooks	Any Relevant Books	25	1:1
3.	Reference Books			
	Microsoft Word 2016 Step By Step	Joan Lambert, 2015, 1st Edition	5	1:5
	Microsoft Word 2019 Step by Step	Joan Lambert, 2019,1st Edition	5	1:5
	Word For Dummies (For Dummies (Computer/Tech))	Dan Gookin, 2021,1st Edition	5	1:5
4.	Journals/Publication/Magazines	- ICT journals (Monthly)	5	1:5
B.	*Learning Facilities & Infrastructure*			
1	Lecture Room	- 8x12m; equipped with IT equipment and internet		1:25
2.	Library	- Multipurpose		
C.	*Consumable Materials*			
1.	Blank Disk	- CD-R/RW - DVD/CDRW	5	1:4
2.	Stationery	- Whiteboard marker, printing paper, printer ink		
D.	**Tools and Equipment**			
1	Operating systems	-Windows XP,7,10, Vista,7, Linux,	5	1-25
2	Application Software	• MS-Office 10 or above	5	1:5
3	UPS	• 750 Volt Ampère	13	1:2
4	Divider	• American socket supporter	13	1:2
5	Desktop Computer including its peripherals	- w/15 inch flat monitor and 120 GB Hard disk; RAM size 1GB; 3Gz or above	25	1:1
6	Multimedia projector	- LCD	1	1:25
7	Locker	- wooden or metal	2	1:25
8	Cabinet	- metal	1	1:25

LEARNING MODULE 07
TVET-PROGRAMME TITLE: Web Development and Database Administration **Level I**
MODULE TITLE: Operating Spreadsheet Application
MODULE CODE: EIS WDDBA1 M07 0322
NOMINAL DURATION: 48 Hours
MODULE DESCRIPTION: This modules describes the performance outcomes, skills and knowledge required to operate spreadsheet applications and perform basic operations, including creating and formatting spreadsheet data, incorporating charts and objects, and customising and printing spreadsheets.
LEARNING OUTCOMES At the end of the module the trainee will be able to: **LO1**. Create spreadsheets **LO2**. Customize basic settings **LO3**. Format spreadsheet **LO4**. Incorporate object and chart in spreadsheet **LO5**. Print spreadsheet

MODULE CONTENTS:
 	
LO1. **Create spreadsheets**
 	
    1.1. Purpose, use and function of spreadsheet application.
 	
    1.2. Opening spreadsheet application, creating spreadsheet files and entering numbers, text and symbols into cells
 	
    1.3. Entering simple formulas and function using cell referencing
 	
    1.4. Correcting formulas when error messages occur
 	
    1.5. Using a range of common tools during spreadsheet development
 	
    1.6. Editing columns and rows within the spreadsheet
 	
    1.7. Using the auto-fill function to increment data
 	
    1.8. Saving spreadsheet to directory or folder
 	
LO2. Customize basic settings
 	
    2.1 Adjusting page layout to meet user requirements or special needs
 	
    2.2 Opening and viewing different toolbars
 	
    2.3 Changing font settings appropriately

2.4 Changing alignment options and line spacing using formatting features.

2.5 Formatting cell to display different styles

2.6 Modifying margin sizes to suit the document

2.7 Viewing multiple spreadsheets concurrently

LO3. Format spreadsheet

3.1 Using formatting features

3.2 Copying selected formatting features from another cell in or from another active spreadsheet

3.3 Using formatting tools in spreadsheet

3.4 Aligning information in a selected cell

3.5 Inserting headers and footers using formatting features

3.6 Saving spreadsheet in another format

3.7 Saving and closing spreadsheet to storage device

LO4. Incorporate object and chart in spreadsheet

4.1 Importing an object into an active spreadsheet

4.2 Manipulating imported object using formatting features

4.3 Creating a chart using selected data in the spreadsheet

4.4 Displaying selected data in a different chart

4.5 Modifying chart using formatting features

LO5. Print spreadsheet

5.1. Previewing spreadsheet in print preview mode

5.2. Selecting basic printer options

5.3. Printing spreadsheet or selected part of spreadsheet

5.4. Submitting the spreadsheet to appropriate person for approval or feedback

Learning Methods:				
For none impaired trainees	**Reasonable Adjustment for Trainees with Disability (TWD)**			
	Low Vision	**Deaf**	**Hard of hearing**	**Physical impairment**
Lecture-discussion	❖ Provide large print text ❖ Prepare the lecture in **Audio/video** ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text ❖ Make sure the luminosity of the light of class room is kept ❖ Use normal tone of voice ❖ Encourage trainees to record the lecture in audio format ❖ Provide Orientation on the physical feature of the work shop ❖ Summarize main points	❖ Assign sign language interpreter ❖ Arrange the class room seating to be conducive for eye to eye contact ❖ Make sure the luminosity of the light of class room is kept ❖ Introduce new and relevant vocabularies ❖ Use short and clear sentences ❖ Give emphasis on visual lecture and ensure the attention of the trainees ❖ Avoid movement during lecture time ❖ Present the lecture in video	❖ Organize the class room seating arrangement to be accessible to trainees ❖ Speak loudly ❖ Ensure the attention of the trainees ❖ Present the lecture in video format ❖ Ensure the attention of the trainees	❖ Organize the class room seating arrangement to be accessible for wheelchairs users. ❖ Facilitate and support the trainees who have severe impairments on their upper limbs to take note ❖ Provide Orientation on the physical feature of the work shop

		❖ format ❖ Summarize main points		
Demonstration	❖ Conduct close follow up ❖ Use verbal description ❖ Provide special attention in the process of guidance ❖ facilitate the support of peer trainees ❖ Prepare & use simulation	❖ use Sign language interpreter ❖ Use video recorded material ❖ Ensure attention of the trainees ❖ Provide structured training ❖ Show clear and short method ❖ Use gesture ❖ rovide tutorial support (if necessary)	❖ Illustrate in clear & short method ❖ Use Video recorded material ❖ Ensure the attention of the trainees ❖ rovide tutorial support (if necessary)	❖ Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines ❖ Assign peer trainees to assist ❖ Conduct close follow up ❖ rovide tutorial support (if necessary
Exercise	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training ❖ Introduce new and relevant vocabularies	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/ practical training	❖ Assign peer trainees ❖ Use additional nominal hours if necessary

ASSESSMENT METHODS:

Interview		❖ Use sign language interpreter ❖ Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter ❖ Use short and clear questioning ❖ Time extension	❖ Speak loudly ❖ Using sign language interpreter if necessary	❖ Use written response as an option for the trainees having speech challenges
Written test	❖ Prepare the exam in large texts ❖ Use interview as an option if necessary ❖ Prepare the exam in audio format ❖ Assign human reader ❖ (if necessary) ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers ❖ Avoid essay writing ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, true or false, matching and short answers if necessary.	❖ Use oral response as an option to give answer for trainees having severe upper limb impairment ❖ Time extension for trainees having severe upper limb impairment
Practical exam	❖ Brief the instruction or provide them in large text ❖ Time extension	❖ Use sign language interpreter ❖ Brief on the instruction of the exam ❖ Provide activity-based/ practical assessment method ❖ Time extension	❖ Provide activity based assessment ❖ Brief on the instruction of the exam ❖ Use loud voice ❖ Time extension	❖ Provide activity based assessment ❖ Conduct close follow up ❖ Time extension

ASSESSMENT CRITERIA:

LO1. Create spreadsheets

- Open spreadsheet application, create spreadsheet files and enter numbers, text and symbols into cells according to information requirements
- Enter simple formulas and functions using cell referencing where required
- Correct formulas when error messages occur
- Use a range of common tools during spreadsheet development
- Edit columns and rows within the spreadsheet
- Use the auto-fill function to increment data where required
- Save spreadsheet to directory or folder

LO2. Customize basic settings

- Adjust page layout to meet user requirements or special needs
- Open and view different toolbars
- Change font settings so that they are appropriate for the purpose of the document 2.4 Change alignment options and line spacing according to spreadsheet formatting features
- Format cell to display different styles as required
- Modify margin sizes to suit the purpose of the spreadsheets
- View multiple spreadsheets concurrently

LO3. Format spreadsheet

- Use formatting features as required
- Copy selected formatting features from another cell in the spreadsheet or from another active spreadsheet
- Use formatting tools as required within the spreadsheet
- Align information in a selected cell as required
- Insert headers and footers using formatting features
- Save spreadsheet in another format
- Save and close spreadsheet to storage device

LO4. Incorporate object and chart in spreadsheet

- Import an object into an active spreadsheet

- Manipulate imported object by using formatting features

- Create a chart using selected data in the spreadsheet

- Display selected data in a different chart

- Modify chart using formatting features

LO5. Print spreadsheet

- Preview spreadsheet in print preview mode

- Select basic printer options

- Print spreadsheet or selected part of spreadsheet

- Submit the spreadsheet to appropriate person for approval or feedback

Annex: Resource Requirements

Module code		Module title		
EIS WDDBA1 M07 0322		**Operating Spreadsheet Application**		
Item No.	**Category/Item**	**Description/ Specifications**	**Quantity**	**Recommended Ratio (Item: Trainee)**
A.	*Learning Materials*			
1.	TTLM	Teacher's made handouts	25	1:1
2.	Textbooks	Any Relevant Books	25	1:1
3.	Reference Books			
3.1	Microsoft Excel 2016 Step by Step	Curtis Frye, 1st Edition, 2016	5	1:5
3.2	Microsoft Excel 2019 Step by Step	Curtis Frye ,2018 ,1st Edition	5	1:5
3.3	MASTERING MICROSOFT EXCEL	Aaron Baddey , 2020-2021	5	1:5
4.	Journals/Publication/Magazines	- ICT journals(Monthly)		1:25
B.	*Learning Facilities & Infrastructure*			
1	Lecture Room	- 8x12m; equipped with IT equipment and internet	1	1:25
2.	Library	- Multipurpose	1	1:25
3.	ICT tool room	- Multipurpose storage	1	1:25
C.	*Consumable Materials*			
1.	Blank Disk	- CD-R/RW - DVD/CDRW	5	1:5
2.	Stationery	- Whiteboard marker, printing paper, printer ink	-	-
D.	**Tools and Equipment's**			
1	Samples	• Inventory Record		
2	Operating systems	-window 7,8, 10 - Ubuntu, Xp(optional)	-	-
3	ISP Service	• EV-DO	1	1:25

		• Broadband		
4	UPS	• 750 Volt Am per	13	1:2
5	Divider	• socket supporter	13	1:2
6	Desktop Computer including its peripherals	- w/15 inch flat monitor and 500 GB Hard disk; RAM size 2GB; 3.4 Ghz or above	25	1:1
7	Multimedia projector	- LCD	1	Per section
8	Printer	- Capability of A4 printing - color printing capability	1	1:25
9	Network toolkit	- set/case	5	1:5
10	Maintenance toolkit	- set/case	5	1:5
11	Scanner	- A4 paper size	2	1:13
12	Web came	-12 pixel and above	2	1:13
13	Shelves	- wooden or metal	5	5:25
14	Locker	- wooden or metal	2	2:25
15	Cabinet	- metal	2	1:13

<table>
<tr><td colspan="3" align="center">**LEARNING MODULE 08**</td></tr>
<tr><td colspan="3">**TVET-PROGRAMME TITLE**: Web Development and Database Administration **Level I**</td></tr>
<tr><td colspan="3">**MODULE TITLE**: Accessing and Using Database Application</td></tr>
<tr><td colspan="3">**MODULE CODE**: EIS WDDB1 M08 0322</td></tr>
<tr><td colspan="3">**NOMINAL DURATION: .70 Hours**</td></tr>
<tr><td colspan="3">**MODULE DESCRIPTION**: This module defines the competency required to access Database Application and perform basic operations.</td></tr>
<tr><td colspan="3">**LEARNING OUTCOMES**

At the end of the module the trainee will be able to:

LO1. Create database objects

LO2. Add record on table

LO3. Customize basic settings</td></tr>
<tr><td colspan="3">**MODULE CONTENTS:**

LO1. Create database objects

    1.1 Occupational Health & Safety (OH&S)

    1.2 Introduction to database and database management systems

    1.3 Designing a database incorporating basic Database design principles

    1.4 Opening Database application

    1.5 Creating Database objects

    1.6 Modifying Database object as required

    1.7 Creating Relationship with tables

LO2. Add record on table

    2.1 Adding data in a table according to information requirements

    2.2 Modifying and deleting records as required

    2.3 Saving and compiling database objects

LO3. **Customize basic settings**

    3.1 Adjusting page layout to meet user requirements

    3.2 Opening and viewing different toolbars

    3.3 Formatting fonts as appropriate for the purpose of the database entries</td></tr>
</table>

Learning Methods:				
For none impaired trainees	**Reasonable Adjustment for Trainees with Disability (TWD)**			
	Low Vision	**Deaf**	**Hard of hearing**	**Physical impairment**
Lecture-discussion	❖ Provide large print text ❖ Prepare the lecture in **Audio/video** ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text ❖ Make sure the luminosity of the light of class room is kept ❖ Use normal tone of voice ❖ Encourage trainees to record the lecture in audio format ❖ Provide Orientation on the physical feature of the work shop ❖ Summarize main points	❖ Assign sign language interpreter ❖ Arrange the class room seating to be conducive for eye to eye contact ❖ Make sure the luminosity of the light of class room is kept ❖ Introduce new and relevant vocabularies ❖ Use short and clear sentences ❖ Give emphasis on visual lecture and ensure the attention of the trainees ❖ Avoid movement during lecture time ❖ Present the lecture in video format	❖ Organize the class room seating arrangement to be accessible to trainees ❖ Speak loudly ❖ Ensure the attention of the trainees ❖ Present the lecture in video format ❖ Ensure the attention of the trainees	❖ Organize the class room seating arrangement to be accessible for wheelchairs users. ❖ Facilitate and support the trainees who have severe impairments on their upper limbs to take note ❖ Provide Orientation on the physical feature of the work shop

		❖ Summarize main points		

Demonstration	❖ Conduct close follow up
	❖ Use verbal description
	❖ Provide special attention in the process of guidance
	❖ facilitate the support of peer trainees
	❖ Prepare & use simulation
		❖ use Sign language interpreter
		❖ Use video recorded material
		❖ Ensure attention of the trainees
		❖ Provide structured training
		❖ Show clear and short method
		❖ Use gesture
		❖
		   rovide tutorial support
		   (if necessary)
			❖ Illustrate in clear & short method
			❖ Use Video recorded material
			❖ Ensure the attention of the trainees
			❖
			   rovide tutorial support
			   (if necessary)
				❖ Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines
				❖ Assign peer trainees to assist
				❖ Conduct close follow up
				❖
				   rovide tutorial support
				   (if necessary

Group discussion	❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Brief the thematic issues of the work	❖ Use sign language interpreters ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member	❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member	❖ Introduce the trainees with their peers

			❖ Inform the group members to speak loudly	
Exercise	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training ❖ Introduce new and relevant vocabularies	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/ practical training	❖ Assign peer trainees ❖ Use additional nominal hours if necessary
Individual assignment	❖ prepare the assignment questions in large text ❖ Encourage the trainees to prepare and submit the assignment in large texts ❖ Make available recorded assignment questions ❖ Facilitate the trainees to prepare and submit the assignment in soft or hard copy	❖ Use sign language interpreter ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	

ASSESSMENT METHODS:

Interview		❖ Use sign language interpreter ❖ Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter ❖ Use short and clear questioning ❖ Time extension	❖ Speak loudly ❖ Using sign language interpreter if necessary	❖ Use written response as an option for the trainees having speech challenges
Written test	❖ Prepare the exam in large texts ❖ Use interview as an option if necessary ❖ Prepare the exam in audio format ❖ Assign human reader ❖ (if necessary) ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers ❖ Avoid essay writing ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, true or false, matching and short answers if necessary.	❖ Use oral response as an option to give answer for trainees having severe upper limb impairment ❖ Time extension for trainees having severe upper limb impairment
Demonstration /Observation	❖ Brief the instruction or provide them in large text ❖ Time extension	❖ Use sign language interpreter ❖ Brief on the instruction of the exam ❖ Provide activity-based/ practical assessment method ❖ Time extension	❖ Provide activity based assessment ❖ Brief on the instruction of the exam ❖ Use loud voice ❖ Time extension	❖ Provide activity based assessment ❖ Conduct close follow up ❖ Time extension

ASSESSMENT CRITERIA:

LO.1 Create database objects

- Database application is opened and designed incorporating basic design principles
- Database object is created according to database usage, as well as user requirements
- Database object is modified as required
- Creating Relationship with tables

LO.2 Add record on table

- Data in a table are added and modified according to information requirements
- Records are added, modified and deleted as required
- Database objects are saved and compiled

LO.3 Customize basic settings

- Page layout is adjusted to meet user requirements
- Different toolbars are opened and viewed
- Font is formatted as appropriate for the purpose of the database entries

Annex: Resource Requirements

Module Code EIS WDDB1 M08 0322		Module title Accessing and Using Database Application		
Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Trainee)
A.	*Learning Materials*			
1.	TTLM	Trainer's made handouts	25	1:1
2.	Reference Books			
2.1	Fundamentals of |Database System 4th Edition Ramez Elmasri	Ramez Elmasri, 6th Edition, 2016	25	1:5
2.2	Access 2016 BIBLE	Michael Alexander, Dick Kusleika, 2016	25	1:5
3	Internet and virtual library		Audio visual	1:1
B.	*Learning Facilities & Infrastructure*			
1.	Lecture Room	Standard	1	1:25
2.	Library	equipped with database books	1	1:25
3.	Computer lab	- 8x12m; equipped with computers and whiteboard	1	1:25
C.	*Consumable Materials*			
1.	Blank CD	- CD-R/RW	5	1:5
2	Stationery	- Whiteboard marker, printing paper, printer ink	-	-
D.	*Tools and Equipment's*			
1.	Computer	- w/15 inch monitor and 120 GB Hard disk; RAM size 2 GB; 3Gz or above with installed operating system (windows 7 and above)	25	1:1
2	White Board	1.50 X 1.50	1	1:25
3	UPS	750 Volt Ampere	13	1:2
4	Divider	American socket supporter	13	1:2
5	Multimedia projector	- LCD	1	1:25
6	Printer	Laser Jet	1	1:25
7	Software	DB applications, DBMS	5	1:5

	LEARNING MODULE 09	
	TVET-PROGRAMME TITLE: Web Development and Database Administration **Level I**	
	MODULE TITLE: Maintaining Inventories of Hardware and Software and Documentation	
	MODULE CODE: EIS WDDBA1 M09 0322	
	NOMINAL DURATION: 30 Hours	

MODULE DESCRIPTION: This modules defines the competence required to record and store details of software, hardware and technical documentation.

LEARNING OUTCOMES

At the end of the module the trainee will be able to:

LO1. Document and update inventory

LO2. Store technical documentation

LO3. Assess quality of receive articles

MODULE CONTENTS:

LO1. Document and update inventory

    1.1. Reviewing OHS requirement.

    1.2. Inventory principles and concept; techniques and procedures

    1.3. Maintaining hardware equipment inventory to create profile or description for each.

    1.4. Maintaining and updating software inventory and licenses during upgrading.

    1.5. Recording and organizing storage of user documentation or technical manuals

LO2. Store technical documentation

    2.1 Taking action to ensure software, hardware and equipment not in use and stored as recommended by technical manuals

    2.2 Storing technical documentation and insure its security

    2.3 Accessing and disseminating technical documentation

LO3. Assess quality of receive articles

    3.1 Checking received materials, articles or final product in workplace standards

    3.2 Measuring materials, articles or products using appropriate measuring instruments

    3.3 Identifying causes of any identified faults and taking corrective actions in workplace procedures

Learning Methods:				
For none impaired trainees	Reasonable Adjustment for Trainees with Disability (TWD)			
	Low Vision	Deaf	Hard of hearing	Physical impairment
Lecture-discussion	❖ Provide large print text ❖ Prepare the lecture in **Audio/video** ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text ❖ Make sure the luminosity of the light of class room is kept ❖ Use normal tone of voice ❖ Encourage trainees to record the lecture in audio format ❖ Provide Orientation on the physical feature of the work shop ❖ Summarize main points	❖ Assign sign language interpreter ❖ Arrange the class room seating to be conducive for eye to eye contact ❖ Make sure the luminosity of the light of class room is kept ❖ Introduce new and relevant vocabularies ❖ Use short and clear sentences ❖ Give emphasis on visual lecture and ensure the attention of the trainees ❖ Avoid movement during lecture time ❖ Present the lecture in video format	❖ Organize the class room seating arrangement to be accessible to trainees ❖ Speak loudly ❖ Ensure the attention of the trainees ❖ Present the lecture in video format ❖ Ensure the attention of the trainees	❖ Organize the class room seating arrangement to be accessible for wheelchairs users. ❖ Facilitate and support the trainees who have severe impairments on their upper limbs to take note ❖ Provide Orientation on the physical feature of the work shop

		❖ Summarize main points		
Demonstratio n	❖ Conduct close follow up ❖ Use verbal description ❖ Provide special attention in the process of guidance ❖ facilitate the support of peer trainees ❖ Prepare & use simulation	❖ use Sign language interpreter ❖ Use video recorded material ❖ Ensure attention of the trainees ❖ Provide structured training ❖ Show clear and short method ❖ Use gesture ❖ rovide tutorial support (if necessary)	❖ Illustrate in clear & short method ❖ Use Video recorded material ❖ Ensure the attention of the trainees ❖ rovide tutorial support (if necessary)	❖ Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines ❖ Assign peer trainees to assist ❖ Conduct close follow up ❖ rovide tutorial support (if necessary

ASSESSMENT METHODS:				
Interview		❖ Use sign language interpreter ❖ Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter ❖ Use short and clear questioning ❖ Time extension	❖ Speak loudly ❖ Using sign language interpreter if necessary	❖ Use written response as an option for the trainees having speech challenges
Written test	❖ Prepare the exam in large texts ❖ Use interview as an option if necessary ❖ Prepare the exam in audio format ❖ Assign human reader ❖ (if necessary) ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers ❖ Avoid essay writing ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, true or false, matching and short answers if necessary.	❖ Use oral response as an option to give answer for trainees having severe upper limb impairment ❖ Time extension for trainees having severe upper limb impairment
Demonstration /Observation	❖ Brief the instruction or provide them in large text ❖ Time extension	❖ Use sign language interpreter ❖ Brief on the instruction of the exam ❖ Provide activity-based/ practical assessment method ❖ Time extension	❖ Provide activity based assessment ❖ Brief on the instruction of the exam ❖ Use loud voice ❖ Time extension	❖ Provide activity based assessment ❖ Conduct close follow up ❖ Time extension

ASSESSMENT CRITERIA:

LO.1 Document and update inventory

- Hardware inventory is maintained that creates a profile or description of each piece of Hardware

- Software inventory and licenses are maintained and updated, as required, particularly when upgrading software

- Storage of user documentation or technical manuals are recorded and organized

LO.2 Store technical documentation

- Action is taken to ensure software, hardware and equipment not in use, stored in a manner as recommended by technical manuals

- Ensure technical documentation is stored securely

- Technical documentation are accessed and disseminated as required by clients

LO.3 Assess quality of receive articles

- Received materials, articles or final product are checked against workplace standards.

- Materials, articles or products are measured using the appropriate measuring instruments in accordance with workplace procedures

- Causes of any identified faults are identified and corrective actions are taken in accordance with workplace procedures

Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Trainee)
Module code **EIS WDDBA1 M09 0322**		**Module title** **Maintaining inventories of hardware and software and documentation**		
A.	*Learning Materials*			
1.	TTLM	Teacher's made • Teacher guide • Learning Guide • Assessment packet	25	1:1
2.	Textbooks	If Available	5	1:1
3.	Reference Books	If Available	5	1:5
4.	Journals/Publication/Magazines	- ICT journals(Monthly)	5	1:25
B.	*Learning Facilities & Infrastructure*			
1	Lecture Room	- 8x12m; equipped with IT equipment and internet	1	1:25
2.	Library	- Multipurpose	1	1:25
3	ICT Tool room	-Multipurpose storage	1	1:25
C.	*Consumable Materials*			
1.	Blank Disk	- CD-R/RW - DVD/CDRW	5	1:5
2.	Stationery	- Whiteboard marker, printing paper, printer ink	–	–
D.	*Tools and Equipment's*			
1	Samples	• Inventory Record		1:25
2	ISP Service	• Current Internet Technologies (portable 4G modem, Broadband)	1	1:25

3	UPS	• 750 Volt Am per	25	1:1
4	Divider	• American socket supporter	13	1:2
5	Desktop Computer including its peripherals	- w/15 inch flat monitor and 120 GB Hard disk; RAM size 1GB; 3Gz or above	25	1:1
6	Multimedia projector	- LCD	1	Per section
7	Printer	- Capability of A3 printing - color printing capability	1	Per section
8	Network toolkit	- set/case	5	1:5
9	Maintenance toolkit	- set/case	5	1:5
10	Scanner	- HP 2055	2	1:13
11	Web cam	-8piexel and above	2	1:13
12	Shelves	- wooden or metal	5	5:25
13	Locker	- wooden or metal	2	2:25
14	Cabinet	- metal	2	1:13

<table>
<tr><td colspan="3" align="center">LEARNING MODULE 10</td></tr>
<tr><td colspan="3">TVET-PROGRAMME TITLE: Web development and database administration Level I</td></tr>
<tr><td colspan="3">MODULE TITLE: Creating a simple mark up language document</td></tr>
<tr><td colspan="3">MODULE CODE: <u>EIS WDDBA1 10 0322</u></td></tr>
<tr><td colspan="3">NOMINAL DURATION: 70 Hours</td></tr>
<tr><td colspan="3">MODULE DESCRIPTION: This module describes the performance outcomes, skills and knowledge required to design, create and save a basic markup language document using text editor.</td></tr>
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LEARNING OUTCOMES

At the end of the module the trainee will be able to:

LO1. Review requirements

LO2. Create document structure

LO3. Validate documents
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MODULE CONTENTS:

LO1. Review requirements

    1.1 Introduction to markup language

    1.2 Reviewing document requirements

    1.3 Selecting markup language based on organizational standards

    1.4 Reviewing document structure

LO2. Create document structure

    2.1 Creating basic elements of document to create the required web page.

    2.2 Depicting document structure of markup sections

    2.3 Writing simple markup language

LO3. **Validate documents**

    3.1 Validating markup language document

    3.2 Validating markup language document in different browsers

    3.3 Validating simple markup language document
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Learning Methods:				
For none impaired trainees	**Reasonable Adjustment for Trainees with Disability (TWD)**			
	Low Vision	**Deaf**	**Hard of hearing**	**Physical impairment**
Lecture-discussion	❖ Provide large print text ❖ Prepare the lecture in **Audio/video** ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text ❖ Make sure the luminosity of the light of class room is kept ❖ Use normal tone of voice ❖ Encourage trainees to record the lecture in audio format ❖ Provide Orientation on the physical feature of the work shop ❖ Summarize main points	❖ Assign sign language interpreter ❖ Arrange the class room seating to be conducive for eye to eye contact ❖ Make sure the luminosity of the light of class room is kept ❖ Introduce new and relevant vocabularies ❖ Use short and clear sentences ❖ Give emphasis on visual lecture and ensure the attention of the trainees ❖ Avoid movement during lecture time ❖ Present the lecture in video format	❖ Organize the class room seating arrangement to be accessible to trainees ❖ Speak loudly ❖ Ensure the attention of the trainees ❖ Present the lecture in video format ❖ Ensure the attention of the trainees	❖ Organize the class room seating arrangement to be accessible for wheelchairs users. ❖ Facilitate and support the trainees who have severe impairments on their upper limbs to take note ❖ Provide Orientation on the physical feature of the work shop

		❖ Summarize main points		
Demonstratio n	❖ Conduct close follow up ❖ Use verbal description ❖ Provide special attention in the process of guidance ❖ facilitate the support of peer trainees ❖ Prepare & use simulation	❖ use Sign language interpreter ❖ Use video recorded material ❖ Ensure attention of the trainees ❖ Provide structured training ❖ Show clear and short method ❖ Use gesture ❖ rovide tutorial support (if necessary)	❖ Illustrate in clear & short method ❖ Use Video recorded material ❖ Ensure the attention of the trainees ❖ rovide tutorial support (if necessary)	❖ Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines ❖ Assign peer trainees to assist ❖ Conduct close follow up ❖ rovide tutorial support (if necessary
Group discussion	❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Brief the thematic issues of the work	❖ Use sign language interpreters ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member	❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other	❖ Introduce the trainees with their peers

			❖ group member ❖ Inform the group members to speak loudly	
Exercise	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training ❖ Introduce new and relevant vocabularies	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/ practical training	❖ Assign peer trainees ❖ Use additional nominal hours if necessary
Individual assignment	❖ prepare the assignment questions in large text ❖ Encourage the trainees to prepare and submit the assignment in large texts ❖ Make available recorded assignment questions ❖ Facilitate the trainees to prepare and submit the assignment in soft or hard copy	❖ Use sign language interpreter ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	

ASSESSMENT METHODS:

Interview		❖ Use sign language interpreter ❖ Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter ❖ Use short and clear questioning ❖ Time extension	❖ Speak loudly ❖ Using sign language interpreter if necessary	❖ Use written response as an option for the trainees having speech challenges
Written test	❖ Prepare the exam in large texts ❖ Use interview as an option if necessary ❖ Prepare the exam in audio format ❖ Assign human reader ❖ (if necessary) ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers ❖ Avoid essay writing ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, true or false, matching and short answers if necessary.	❖ Use oral response as an option to give answer for trainees having severe upper limb impairment ❖ Time extension for trainees having severe upper limb impairment
Demonstration /Observation	❖ Brief the instruction or provide them in large text	❖ Use sign language interpreter ❖ Brief on the instruction of the	❖ Provide activity based assessment ❖ Brief on the instruction of the exam	❖ Provide activity based assessment

	❖ Time extension	exam	❖ Use loud voice	❖ Conduct close follow
		❖ Provide activity-based/ practical assessment method	❖ Time extension	up
		❖ Time extension		❖ Time extension

ASSESSMENT CRITERIA:

LO.1 Review requirements

- Review the requirements of the document
- Select the appropriate markup language based on organizational standards
- Review document structure

LO.2 Create document structure

- Create and assign the basic elements of the document
- Markup sections of the document to depict the structure
- Write simple markup language

LO.3 Validate documents

- Validate markup language document against requirements
- Validate markup language document in different browsers
- Validate simple markup language document

Annex: Resource Requirements

Module code		Module title			
EIS WDDBA1 10 0322		**Creating a simple mark up language document**			
Item No.	**Category/Item**	**Description/ Specifications**	**Quantity**	**Recommended Ratio (Item: Trainee)**	
A.	*Learning Materials*				
1.	TTLM	TTTLM prepared by the trainer	25	1:1	
2.	Reference Books	If available	25	1:1	
B.	*Learning Facilities & Infrastructure*				
1.	Lecture Room	8x12m; equipped with IT equipment and internet	1	1:25	
2.	Library	- Multipurpose standard with audio visual	1	1:25	
C. Resources					
1.	Internet access	Broadband 10MB or 4G portable modem	1	1:25	
2	Text editor	Visual studio, notepad ++ and sublime	25	1:1	
3	Web browser	Mozilla Firefox, Google chrome, Internet explorer and opera Latest versions	25	1:1	

Acknowledgement

The **Ministry of Labor and Skills** wishes to thank and appreciation for the trainers who donated their effort and time to develop this outcome based curriculum for the TVET program Web development and database administration Level I. We also thank all regional TVET Colleges, for active facilitation of their trainers for the development of this curriculum.

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