

K to 12 TECHNOLOGY AND LIVELIHOOD EDUCATION

**ICT - COMPUTER HARDWARE SERVICING
(Exploratory)**

Content Standard	Performance Standard	Learning Competencies	Projects/Activities	Assessment	Duration
LESSON 1: USE OF HAND TOOLS					
<p><i>Demonstrate understanding of/on:</i></p> <ul style="list-style-type: none"> Identifying tasks Selecting tools 	<ol style="list-style-type: none"> Tasks to be undertaken are properly identified. Appropriate hand tools are identified and selected according to the task requirements. 	LO1. Plan and prepare for tasks to be undertaken	Activity 1.1 Preparation of plan in maintaining a personal computer.	<ul style="list-style-type: none"> Performance-based assessment 	2 hours
<ul style="list-style-type: none"> Operating hand tools Enumerating the functions of hand tools Identifying the common faults of using hand tools Preparing tools 	<ol style="list-style-type: none"> Appropriate hand tools are checked for proper operation and safety. Unsafe or faulty tools are identified. Tools for repair are marked according to standard company procedure. 	LO2. Prepare hand tools	Activity 2.1 Segregation of tools according to its classification.	<ul style="list-style-type: none"> Written test 	3 hours
<ul style="list-style-type: none"> Ensuring safety requirements of tools Using tools properly Writing report on malfunctions, unplanned or unusual events 	<ol style="list-style-type: none"> Tools are used according to tasks undertaken. All safety procedure in using tools are observed at all times. Malfunctions, unplanned or unusual 	LO3. Use appropriate hand tools and test equipment	Activity 3.1 Proper use of tools based on its function	<ul style="list-style-type: none"> Performance-based assessment 	3 hours

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	events are reported to the supervisor.				
<ul style="list-style-type: none"> • Maintaining tools properly • Storing tools • Enumerating standard operational procedure, principles and techniques in maintaining tools 	<ol style="list-style-type: none"> 1. Tools are used according to tasks undertaken. 2. Routine maintenance of tools are undertaken according to standard operational procedure, principles, and techniques. 3. Tools are stored safely in appropriate locations in accordance with manufacturers' specifications or standard operating procedure. 	LO4. Maintain hand tools	Activity 4.1 Maintenance of tools	<ul style="list-style-type: none"> • Performance-based assessment 	2 hours

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LESSON 2: PERFORMING MENSURATION AND CALCULATION					
<p><i>Demonstrate understanding of/on:</i></p> <ul style="list-style-type: none"> • Measuring and identifying types of components <ul style="list-style-type: none"> ➤ memory ➤ data storage capacity • Obtaining correct specifications of the relevant sources 	<ol style="list-style-type: none"> 1. Objects or components to be measured are identified. 2. Correct specifications are obtained from relevant sources. 	LO1. Select components to be measured	Activity 1.1 Identifying types of memory module Activity 1.2 Identifying types of storage drive and their interface	<ul style="list-style-type: none"> • Performance-based assessment /or • Written test 	5 hours
<ul style="list-style-type: none"> • Converting and calculating 	<ol style="list-style-type: none"> 1. Accurate measurements are obtained for job. 2. Calculation needed to complete work tasks are performed using the four fundamental operations (addition, subtraction, multiplication, and division) 3. Numerical computation is self-checked and corrected for accuracy. 	LO2. Carry out measurements and calculation	Activity 2.1 Conversion of decimal numbers to binary and vice versa Activity 2.2 Conversion from bytes to kilobytes, megabytes, gigabytes, terabytes	<ul style="list-style-type: none"> • Written test 	5 hours

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LESSON 3: PREPARING AND INTERPRETING TECHNICAL DRAWINGS					
<p><i>Demonstrate understanding of/on:</i></p> <ul style="list-style-type: none"> Selecting drawing conventions Using symbols and graphic organizers 	<ol style="list-style-type: none"> Correct technical drawings are selected according to job requirements. Technical drawings are segregated in accordance with the types and kinds of drawings. 	LO1. Identify different kinds of technical drawings.	1. Preparation of system and program flowcharts	<ul style="list-style-type: none"> Performance-based assessment /or Written test 	3 hours
<ul style="list-style-type: none"> Interpreting flowchart 	<ol style="list-style-type: none"> Components, assemblies, or objects are recognized as required. Dimensions of the key features of the objects depicted in the drawings are correctly identified. Symbols used in the drawings are identified and interpreted correctly. Drawings are checked and validated against job requirements or equipment in accordance with standard operating 	LO2. Interpret technical drawings.		<ul style="list-style-type: none"> Performance-based assessment /or Written test 	3hours

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	procedures.				
<ul style="list-style-type: none"> • Flowcharting 	<ol style="list-style-type: none"> 1. Electrical/ Electronic schematic diagrams are drawn and correctly identified. 2. Correct drawings are identified and equipment are selected and used in accordance with job requirements. 	<p>LO3. Prepare/ make changes on electrical/ electronic schematics and drawings.</p>		<ul style="list-style-type: none"> • Performance-based assessment /or • Written test 	<p>2 hours</p>

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LESSON 4: PRACTICING OCCUPATIONAL HEALTH AND SAFETY PROCEDURES					
<p><i>Demonstrate understanding of/on:</i></p> <ul style="list-style-type: none"> • Identifying and controlling hazards and risks <ul style="list-style-type: none"> ➤ for users and technicians ➤ equipment damage and data loss ➤ environment • Applying 5S in the computer workplace 	<ol style="list-style-type: none"> 1. Workplace hazards and risks are identified and clearly explained. 2. Hazards/risks and their corresponding indicators are identified in accordance with the company procedures. 3. Contingency measures are recognized and established in accordance with organizational procedures. 	<p>LO1. Identify hazards and risks.</p>	<p>Implementing 5S in the computer workplace</p>	<ul style="list-style-type: none"> • Simple Q & A • Interview • Practical examination • Written examination 	<p>4 hours</p>
<ul style="list-style-type: none"> • Implementing Computer Work Station Ergonomics • Determining effects of hazards in the workplace 	<ol style="list-style-type: none"> 1. Effects of hazards are determined. 2. Occupational Health and Safety (OHS) issues and concerns are identified in accordance with workplace requirements and 3. Relevant workplace OHS legislation is explained. 	<p>LO2. Evaluate hazards and risks.</p>	<p>Implementing 5S in the computer workplace</p>	<ul style="list-style-type: none"> • Written examination • Performance Test 	<p>3 hours</p>

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<ul style="list-style-type: none"> • Following safety regulations in the workplace • Enumerating OHS procedures in controlling hazards and risks. • Applying methods of controlling hazards and risks 	<ol style="list-style-type: none"> 1. OHS procedures for controlling hazards and risks are strictly followed. 2. Procedures in dealing with workplace accidents, fire and emergencies are followed in accordance with the organization's OHS policies. 3. Personal protective equipment (PPE) is correctly used in accordance with organization's OHS procedures and practices. 4. Procedures in providing appropriate assistance in the event of workplace emergencies are identified in line with the established organizational protocol. 	<p>LO3. Control hazards and risks.</p>	<p>Simulation activities in dealing with</p> <ul style="list-style-type: none"> • workplace accidents • fire • emergencies 	<ul style="list-style-type: none"> • Written examination • Performance test 	<p>3 hours</p>
					38 hours