

**MURANG’A UNIVERSITY OF TECHNOLOGY**

**COURSE OUTLINE**

**Unit Code: IT/OS/ICT/CR/6/6**

**Unit Title**: **COMPUTER REPAIR AND MAINTENANCE**

**Department:** Information Technology

**Lecturer’s Name:** G. Mutiso

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**Duration of unit**: 150 hours

**UNIT DESCRIPTION**

This unit covers the competencies required for performing computer repair and maintenance using diagnosing, repairing and maintenance tools. It involves performing troubleshooting, disassembling of faulty components, repairing/replacing faulty components, testing of component functionality upgradation and testing of hardware and software.

**Summary of Learning Outcomes:**

1. Perform troubleshooting
2. Disassemble faulty components
3. Repair/Replace and reassemble faulty components
4. Test computer functionality
5. Upgrade computer software/hardware

ELEMENTS AND PERFORMANCE CRITERIA

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| **Topic** | **Week -Lesson** | **Subtopic** |
| **Component troubleshooting** | W1-L1 | Identification of computer parts  Troubleshooting techniques  Troubleshooting process  Assembling of appropriate computer maintenance  tools and maintenance techniques |
| W1-L2 | Establishing theory of probable cause  Testing theory of probable to determine the problem  Identification of the problem  Identification of the appropriate solution to the problem identified. |
| **Dissembling and Assembling** | W2-L1 | Safety measures and precautions  Tools for dissembling and assembling  Hardware tools  Software tools |
| W2- L2 | Assembling and Dissembling  Procedure of Assembling  Procedure of Dissembling  Assembling and dissembling a laptop |
| **CAT** | W3 -L1 | CAT 1 |
| W3 – L2 | Opening CPU unit.  Practical demonstration |
| **Dissembling Faulty components** | W4 – L1 | Identification of the faulty components  Identification of the most appropriate tools to use  Dissembling the faulty component |
| W4 -L2 | Practical exercises |
| **Repair/ replace and reassemble components** | W5 -L1 | Identification of the faulty parts to be repaired/replaced  Acquisition of new parts for the components which require replacement.  Repair to be done to components that need to be repaired  Reassembling of the repaired/replaced components |
| W5 – L2 | Practical exercise |
| **CAT** | W6 -L1 | Practical Assessment CAT |
| W6- L2 |
| **Test computer/component functionality** | W7 -L1 | POST test  Specific component testing  Evaluation of test results  Generating the computer and system report |
| W7 – L2 | Component testing techniques  Develop test plan |
| **CAT 2** | W8 -L1 | CAT 2 |
| W8- L2 | Writing reports |
| **Upgrading computer hardware and software.** | W9 -L1 | Diagnostic problems  Installation of updates  Warranty |
| W9 -L2 | Legal requirements relating to commissioning activities for computer systems and components.  Procedures and techniques for upgrading  Software upgrade process  Reasons for upgrading  Benefits of upgrading hardware |
| **CAT 3** | W10 – L1 | CAT 3 |
| W10 – L2 | Revision |