
SYLLABUS

DIVISION: Business, Engineering & Industrial Technologies **REVISED:** 1/2015

CURRICULUM: Electrical Electronics Engineering Technology, Information Systems Technology (Network Specialist), Track III

COURSE NUMBER AND TITLE: ETR 149-Personal Computer Repair

CREDITS: 3 **HOURS/WK LECTURE:** 3 **HOURS/WK LAB:** 0

I. CATALOG DESCRIPTION:

Teaches the maintenance, troubleshooting, and repair of Personal Computer Systems. Provides fault isolation drill and practice.

II. RELATIONSHIP OF THE COURSE TO CURRICULUM OBJECTIVES:

The course teaches the principles of computer maintenance, repair and troubleshooting

III. REQUIRED BACKGROUND/PREREQUISITES/COREQUISITES:

Prerequisites: None

IV. COURSE CONTENT:

1. Safety/ ESD
2. Identification of hardware and connections
3. Form Factors and Working inside a Computer
4. Power Supplies
5. Motherboards
6. Random Access Memory
7. Display Devices
8. Disassembly of various computers
9. Configure Basic input output system (BIOS)
10. Operating system installation
11. Viruses
12. PC Maintenance and Troubleshooting Strategies

V. LEARNER OUTCOMES :**VII. EVALUATION:**

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| Demonstrate an understanding of the safety procedures and ESD in the lab as well as the workplace. | Written quizzes and tests Oral and written reports Homework and projects |
| Demonstrate the ability to identify all the hard ware located in the computer. Identify main components on the motherboard. | |
| Demonstrate a knowledge of the power supply. How it acts when it fails and how to measure voltages using a multimeter. | |
| Demonstrate how to identify, upgrade, purchase and replace memory. | |
| Identify the purpose of CMOS (Complementary Metal-Oxide Semiconductor), what it contains and how to change its basic parameters | |
| Identify the purpose of various types of preventive maintenance products and procedures and when to use them | |
| Demonstrate the ability to follow basic troubleshooting procedures and how to elicit problem symptoms from customers | |
| Identify common peripheral ports, associated cabling and their connectors | |

VII. The course supports the following general education goals/objectives:DCC Educational Objectives

- Communication
- Critical Thinking
- Information Literacy
- Quantitative Reasoning