

Byng High School

Computer Repair and Troubleshooting I

Syllabus

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Course Number:	8136 (OK Promise Approved)
Pre-requisite:	Fundamentals of Technology or Business and Computer Technology
Career Cluster/Pathway	Information Technology/Information Support and Services, Network Systems
Career Major(s):	Advanced CNC Machinist, Cyber Security Professional (Networking Emphasis), Desktop Support Technician, Enterprise Network Associate, Enterprise Network Associate (Security Emphasis), Enterprise Network Professional, Home Installation Technician, Home Technology Integrator, Home Technology Integrator (Construction Emphasis), LAN/WAN Specialist, Network PC Support Specialist, Network Security Compliance Technician, Network Security Professional (Networking Emphasis), Network Security Technician, Network Server Administrator, Network Systems and Data Communications Analyst, Network Systems Specialist, PC Support and Transaction Technologies, PC Support Technician, SCADA -Manufacturing and Energy Systems Emphasis, Supervisory Control and Data Acquisition Technician (SCADA)
Length:	1 Carnegie Unit (115 class periods theory/60 class periods lab)

Course Description:

Students will prepare for positions related to the maintenance of computers and computer-related equipment through hands-on and project-based learning, textbook assignments, and Internet research. The focus of this course is in the hardware area.

Specific Learning Competencies - *Upon successful completion of this course, the student will be able to:*

1. Understand basic terms concepts, and functions of system components, including how each component should work during normal operation and during the boot process.
2. Demonstrate the basic procedures for adding and removing field replaceable units for both desktop and portable systems.
3. Identify the following problems for device installation and configuration—IRQs, DMAs, and I/O addresses.
4. Identify common peripheral ports, associated cabling, and their connectors and understand proper procedures for installation and configuration
5. Understand concepts and procedures relating to BIOS.

6. Demonstrate methods of upgrading equipment.
7. Diagnose, troubleshoot and isolate problems.
8. Provide preventive maintenance procedures.
9. Practice correct procedures for protecting against hazards to people, hardware, the workplace, and the environment.
10. Identify popular CPUs, motherboards, and RAM and their characteristics.
11. Demonstrate knowledge of basic printer concepts, operations, and components.
12. Understand basic networking concepts, how to swap and configure network cards, and repairs on the network.
13. Demonstrate and apply knowledge of hardware design, operation and maintenance.
14. Demonstrate knowledge of CPU components.
15. Install computer system (e.g., monitor, keyboard, disk drive, and printer).
16. Perform hardware installation, configuration, and upgrades.

Methods of Instruction:

Lectures, class discussions, hands-on-training, demonstrations, projects and performance evaluation.

Evaluation/Grading System:

- Time Sheets 100 points
- Work Orders 50 points
- Driving Forms 50 points
- Assignments 25 points
- Tests/Quizzes 50-100 points

Grading Scale:

- 90-100 A
- 80-89 B
- 70-79 C
- 60-69 D
- 0-59 F

Required Testing:

CompTIA:	A+ (1504)
Testout:	PC Pro (226)
Brainbench:	(Select two) <ul style="list-style-type: none"> • IT Terminology (1109) • Technical Help Desk (1110) • MS Windows Fundamentals (any version) (1111)

Course Textbooks and Instructional Resources:

CompTIA:

A+ Guide to Managing & Maintaining Your PC, 6th Edition, Jean Andrews ISBN-10: 1133135080

CompTIA A+ Certification All-in-One Exam Guide, 6th Ed by Michael Meyers ISBN-10: 007179512X

Computer Service and Repair 4th Edition, Richard Roberts

Computer Service and Repair 4th Edition, Study Guide, JoAnne Keltner

www.testout.com