

**THREE RIVERS COMMUNITY COLLEGE
COURSE OUTLINE**

Course Number/Title: CST K141

Computer Hardware

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Fall 2006
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Lecture: 4 hrs

Laboratory: 1 hrs

Credits: 4 hrs

Contact: 5 hrs

Course Description: This course will provide the principles of maintaining and troubleshooting the personal computer's hardware. The course will cover computer hardware, associated peripherals, configuration, optimization, and repair from the PC technician's point of view. Students will develop critical thinking and troubleshooting skills through emphasis on hands-on experience in installing, maintaining, and processing various problems with computer hardware. This course will begin preparing the student for the CompTIA Core Hardware Examinations for the A+ certification.

Method: Lecture and Lab using the PCs.

Text: A+ Guide to Managing and Maintaining Your PC, 5th Edition, by Jean Andrews

Prerequisite: CSA K105 or equivalent, or permission of instructor.

COURSE TOPICS/CONTENT

Week One:

Course introduction and policies
Introducing PC Hardware

Week Two:

How Hardware and Software Work Together

Week Three:

Understanding the Boot Process and Command Line
The Binary Number System and Memory Addressing

Week Four:

Electricity and Power Supplies
Electricity and Multimeters

Week Five:

The Motherboard

Week Six:

Managing Memory
Midterm Review

Week Seven:
Midterm Exam

Week Eight:
Troubleshooting and Maintenance Fundamentals
The Professional PC Technician

Week Nine:
Floppy Disk Drives

Week Ten:
Understanding and Installing Hard Drives
FAT Details

Week Eleven:
Optimizing and Protecting Hard Drives

Week Twelve:
Supporting I/O Devices

Week Thirteen:
Multimedia Devices and Mass Storage

Week Fourteen:
Course Review

Week Fifteen:
Final Exam