

Minnesota State College Southeast

NWAT 1607: PC Hardware Support

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 2

Lab Hours/Week: 2

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This course covers the concepts and familiarity of computer hardware components. System boards, storage devices and peripherals will be studied as to their basic purpose and functionality. Emphasis will be placed on the assembling and disassembling of a microcomputer. The student will be provided with a background in some of the techniques used to service personal computers. Fundamentals of hardware troubleshooting as it relates to keyboards, monitors, printers, mouse, floppy drives, and other peripherals will be explored. (Prerequisite: None) (3 credits: 2 lecture/1 lab)

B. COURSE EFFECTIVE DATES: 03/03/2003 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

D. LEARNING OUTCOMES (General)

1. Upgrade systemboard components
2. Troubleshoot hard drives
3. Analyze hardware components
4. Identify video adapter functions
5. Describe mouse function
6. Compare monitor quality and performance
7. Describe keyboard functions
8. Install hard drive
9. Describe memory management
10. Select systemboards and CPUs
11. Define systemboard time execution
12. Describe systemboard programming logic
13. Define systemboard data transfer
14. Identify systemboard components
15. Plan hardware safety
16. Analyze computer startup procedures
17. Analyze operating system and hardware interactions
18. Analyze software and hardware interactions
19. Replace hard drive
20. Install video adaptor
21. Identify systemboard jumper configurations
22. Upgrade CPU
23. Upgrade systemboard
24. Install printer cards
25. Install communication ports
26. Install power supply
27. Recover lost data
28. Install systemboard
29. Describe basic electrical principles
30. Describe modem communications
31. Install cd-rom
32. Install modem
33. Assemble PC
34. Install digital equipment
35. Install printers
36. Install soundcards
37. Define multimedia technology
38. Describe power supplies
39. Install memory
40. Identify software copyrights
41. Display workplace professionalism
42. Troubleshoot hardware-related keyboard problems
43. Describe hardware troubleshooting principles
44. Develop course of action techniques

45. Troubleshoot hardware-related printer problems
46. Troubleshoot hardware-related mouse problems
47. Describe tracking of service calls
48. Describe good service support goals
49. Identify customer needs
50. Display interpersonal communication
51. Use hardware diagnostic software
52. Display common sense approach
53. Identify hardware-related error messages
54. Verify hardware component repair
55. Troubleshoot hardware-related monitor problems
56. Install hardware diagnostic software
57. Troubleshoot SCSI hard drive problems
58. Troubleshoot hardware-related bios problems
59. Troubleshoot power supplies
60. Troubleshoot hardware-related tape backup device problems
61. Troubleshoot hardware-related CD-ROM problems
62. Troubleshoot hardware-related hard drive problems
63. Troubleshoot hardware-related floppy drive problems

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted