Class Hours: 3.0                        Credit Hours: 4.0
Laboratory Hours: 3.0                  Revised: Spring 07

NOTE: This course is not intended for transfer credit.

Catalog Course Description:

This course is designed for computer personnel who need advanced technical knowledge about the
PC, its operating system and key utilities, and PC-based local area networks. The course follows the
current Computing Technology Industry Association (CompTIA) A+ Certification criteria guidelines
for the Operating Systems examination.

Entry Level Standards:

The student MUST be familiar with the architecture and operations of standard PCs (personal
computers). The student must be able to use Microsoft Windows to create directories and to copy,
move, rename, and delete directories and files. The student must have math, writing, verbal and
English language skills at the college entry level.

Prerequisites:

None

Corequisites:

NETW1010 or consent of instructor

Textbook(s) and Other Course Materials:

Upgrading and Repairing PCs, (latest edition), Scott Mueller
Various PC service guides and other product manuals (operating systems) as required

I. Week/Unit/Topic Basis:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1-2</td>
<td>Course introduction; operating system concepts; Using Windows XP Professional</td>
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<tr>
<td>3-5</td>
<td>Installing, configuring, troubleshooting Windows XP Professional</td>
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II. Course Objectives*:

A. Develop a working understanding of the terminology, hardware devices, and system software (DOS, Windows) associated with the Personal Computer (PC). III, II, V, IX, X

B. Exhibit a knowledge of advanced features of Microsoft Windows concepts. II, III, IX

C. Exhibit a knowledge of all Microsoft client operating systems. II, III, IX

D. Exhibit a knowledge of diagnosing and troubleshooting PCs. II, III, V

E. Exhibit a knowledge of installing, configuring, and upgrading PC software. II, IX

F. Exhibit proficiency in written and oral communications about computers. I, IX

*Roman numerals after course objectives reference goals of the NETW program.

III. Instructional Processes*:

Students will:

1. Use Windows 95/98/NT/2000/XP and DOS operating systems commands and utilities to perform practical tasks for personal computing. Communication, Technological Literacy, Transitional Strategy, Active Learning

2. Solve problems by diagnosing and troubleshooting PC problems. Technological Literacy, Transitional Strategy, Active Learning

3. Solve problems encountered in the installation, configuration, and upgrading of PC components and system software. Technological Literacy, Transitional Strategy, Active Learning


5. Handle and examine modern computing devices. Technological Literacy, Transitional Strategy, Active Learning

6. Prepare documents for management explaining PC system problems and the need for new systems, upgrades, networks, etc. Communication, Technological Literacy, Transitional Strategy, Active Learning
7. Practice elements of the work ethic such as punctuality, professionalism, dependability, cooperation, and contribution. Social/Behavioral Sciences Outcome

*Strategies and outcomes listed after instructional processes reference TBR’s goals for strengthening general education knowledge and skills, connecting coursework to experiences beyond the classroom, and encouraging students to take active and responsible roles in the educational process.

IV. Expectations for Student Performance*

Upon successful completion of this course, the student should be able to:

1. Use terminology associated with computer science, data processing, and networking/communications systems fields. A,B,C,D,E
2. Use computer keyboard, diskette, CPU hardware. A,B,C,D,E
3. Use internal and external DOS commands. A,C
4. Prove DOS proficiency in the creation of prompts, sub-directories, formatted disks, batch files and the utilization of pipes and redirection. C
5. Identify basic terms, concepts, and functions of system modules, including how each module should work during normal operation. A,B,C,D,E
6. Identify common symptoms and problems associated with each module and how to troubleshoot and isolate the problems. A,D
7. Identify basic troubleshooting procedures and good practices for eliciting problem symptoms from customers. A,D
8. Identify the purpose of various types of preventive maintenance products and procedures and when to use/perform them. A,D,E
9. Identify basic networking concepts, including how a network works. A
10. Differentiate effective from ineffective behaviors as these contribute to the maintenance or achievement of customer satisfaction. F
11. Identify operating system functions, structure, and major system files. A,B,D
12. Identify ways to navigate the operating system and how to get to needed technical information. A,B,C
13. Identify basic concepts and procedures for creating, viewing and managing files and directories, including procedures for changing file attributes and the ramifications of those changes (for example, security issues). A,B,C
14. Identify the procedures for basic disk management. A,B,C
15. Identify the procedures for installing DOS/Windows 95/98/NT/2000/XP and for bringing the software to a basic operational level. B,C,E
16. Identify steps to perform an operating system upgrade. A,B,C,E
17. Identify the basic system boot sequences, and alternative ways to boot the system software, including the steps to create an emergency boot disk with utilities installed. A,B,C

18. Identify procedures for loading/adding device drivers and the necessary software for certain devices. A,B,C,E

19. Identify the procedures for changing options, configuring, and using the Windows printing subsystem. A,B,E

20. Identify the procedures for installing and launching typical Windows and non-Windows applications. A,B,C,E

21. Recognize and interpret the meaning of common error codes and startup messages from the boot sequence, and identify steps to correct the problems. A,B,C,D

22. Recognize Windows-specific printing problems and identify the procedures for correcting them. B

23. Recognize common system problems and determine how to resolve them. A,B,C,D

24. Identify concepts relating to viruses and virus types their danger, their symptoms, sources of viruses, how they infect, how to protect against them, and how to identify and remove them. A,D

25. Identify the networking capabilities of DOS and Windows including procedures for connecting to the network. A,B,C,E

26. Identify concepts and capabilities relating to the Internet and basic procedures for setting up a system for Internet access. A,B,E

*Letters after performance expectations reference the course objectives listed above.

V. Evaluation:

A. Testing Procedures:

There will be two tests which count 300 points each (or 600 points total). There will be no make-up tests unless prior arrangements are made with the instructor.

B. Laboratory Expectations:

Lab attendance is required. Assignments worth 300 points must be completed and submitted before the assigned deadline. This is a coordinated laboratory class, and assignments must be completed as scheduled.

C. Field Work:

N/A

D. Other Evaluation Methods:

Pop-Quizzes and "Outside-Class" take-home assignments will be given, which will total 100 points.

E. Grading Scale:
VI. Policies:

A. Attendance Policy:

Pellissippi State Technical Community College expects students to attend all scheduled instructional activities. As a minimum, students in all courses must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course. (Pellissippi State Catalog)

Students are expected to promptly attend all lecture and lab classes as assigned.

B. Academic Dishonesty:

Plagiarism, cheating, software piracy, non-educational use of computer systems and other forms of academic dishonesty are strictly prohibited.

C. Accommodations for disabilities:

If you need accommodations because of a disability, if you have emergency medical information to share, or if you need special arrangements in case the building must be evacuated, please inform the instructor immediately. Please see the instructor privately after class or in his/her office. Students must present a current accommodation plan from a staff member in Services for Students with Disabilities (SSWD) in order to receive accommodations in this course. Services for Students with Disabilities may be contacted by going to Goins 127 or 131 or by phone: 694-6751(Voice/TTY) or 539-7153.