A+ COMPUTER SOFTWARE
CSIT 1720

Class Hours: 3.0  Credit Hours: 4.0
Laboratory Hours: 3.0  Revised: Spring 2010

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:

CSIT 1710 or consent of instructor

Textbook(s) and Other Course Materials:


I. Week/Unit/Topic Basis:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>Course introduction; working with people in a technical world; operating system concepts; how the various Windows operating systems work; Using Windows XP Professional</td>
</tr>
<tr>
<td>3-5</td>
<td>Installing, configuring, troubleshooting Windows XP Professional</td>
</tr>
<tr>
<td>6-7</td>
<td>Installing, configuring, troubleshooting Windows Vista and Windows 7</td>
</tr>
<tr>
<td>8-10</td>
<td>Maintaining and Optimizing Windows Systems; Windows Printing</td>
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<tr>
<td>10-12</td>
<td>Tools for Solving Windows Problems; fixing Windows problems</td>
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</tbody>
</table>
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 CSIT 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:

At least three exams will be given. Exams will be worth 50 to 60% of the course grade. These exams may cover one (1) or more (>1) chapter(s). There will be no make-up tests unless prior arrangements are made with the instructor. Some instructors DO NOT give “make-up test”! An alternative is to have an examination after each chapter/subject has been completed.

B. Laboratory Expectations:

Lab attendance is required. Lab assignments will be worth 25 to 40% of the course grade. Assignments must be completed 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. Quizzes and homework assignments may be worth up to 15% of the course grade.

E. Grading Scale:

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>93 – 100</td>
<td>A</td>
</tr>
<tr>
<td>88 – 92</td>
<td>B+</td>
</tr>
<tr>
<td>83 – 87</td>
<td>B</td>
</tr>
<tr>
<td>78 – 82</td>
<td>C+</td>
</tr>
<tr>
<td>73 – 77</td>
<td>C</td>
</tr>
<tr>
<td>65 – 72</td>
<td>D</td>
</tr>
<tr>
<td>Below 65</td>
<td>F</td>
</tr>
</tbody>
</table>

VI. Policies:

A. Attendance Policy:

Pellissippi State Technical Community College expects students to attend all scheduled
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. [NOTE: No differentiation is noted for excused/unexcused absences. These will be treated as an absence.] (Pellissippi State Online Catalog)

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

B. Academic Dishonesty:

Plagiarism, cheating, and other forms of academic dishonesty are prohibited. Students guilty of academic misconduct, either directly or indirectly through participation or assistance, are immediately responsible to the instructor of the class. In addition to other possible disciplinary sanctions which may be imposed through the regular Pellissippi State procedures as a result of academic misconduct, the instructor has the authority to assign an F or a zero for the exercise or examination or to assign an F in the course. (Pellissippi State Online Catalog)

C. Accommodations for disabilities:

Students who need accommodations because of a disability, have emergency medical information to share, or need special arrangements in case the building must be evacuated should inform the instructor immediately, privately after class or in her or his 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 134 or 126 or by phone: 694-6751(Voice/TTY) or 539-7153. More information is available at www.pstcc.edu/departments/swd/.

D. Computer Usage Guidelines:

College-owned or –operated computing resources are provided for use by students of Pellissippi State. All students are responsible for the usage of Pellissippi State’s computing resources in an effective, efficient, ethical and lawful manner. (Pellissippi State Online Catalog)