NOTE: This course is not intended for transfer credit.

Catalog Course Description:

This course is designed for computer personnel who install, support, and manage Windows NT Workstation systems and includes software installation and configuration, administration of system resources, printers, storage devices and backups. Troubleshooting of system problems is also included.

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. Previous knowledge and understanding of DOS commands such as DIR, COPY, DEL, REN, CD, MD, RD, and EDIT is essential. The student must have math, writing, verbal and English language skills at the college entry level.

Prerequisite:

CST2455 or department approval. A pre-test WILL be administered the first class session, and students NOT meeting the pre-requisites will not be allowed to continue in this class.

Textbook(s) and Other Reference Materials Basic to the Course:


*MCSE Windows NT Workstation 4*, by Dennis Maione, New Riders.

Basic computer service hand tool kit to be acquired during the class.

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>Networking Essentials</td>
</tr>
<tr>
<td>2-3</td>
<td>Introduction to Windows NT Workstation</td>
</tr>
<tr>
<td>3-4</td>
<td>NT Workstation Desktop; Working with Files, Folders, Shortcuts</td>
</tr>
<tr>
<td>5</td>
<td>The Control Panel</td>
</tr>
<tr>
<td>6</td>
<td>Using Windows NT Workstation as a Server; Exam 1</td>
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</tbody>
</table>
II. Course Objectives*:

A. Develop a working understanding of the terminology, hardware devices, and system software associated with computer networks. III, II, V, IX, X

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

C. Exhibit a knowledge of the Windows NT operating system. II, III, IX

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

E. Exhibit a knowledge of installing, configuring, and upgrading Windows NT components and software. II, IX

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

*Roman numerals after course objectives reference goals of the Business and Computer Technologies department.

III. Instructional Processes*:

Students will:

1. Use Windows 95/98/NT and DOS operating systems commands and utilities to perform practical tasks for personal computing. Problem Solving and Decision Making Outcome, Technological Literacy Outcome, Information Literacy Outcome

2. Solve problems by diagnosing and troubleshooting Windows NT problems. Problem Solving and Decision Making Outcome, Technological Literacy Outcome, Information Literacy Outcome, Transitional Strategy, Active Learning Strategy

3. Solve problems encountered in the installation, configuration, and upgrading of Windows NT components and system software. Problem Solving and Decision Making Outcome, Technological Literacy Outcome, Information Literacy Outcome


5. Handle and examine modern computing devices. Technological Literacy Outcome
6. Prepare documents for management explaining network system problems and the need for new systems, upgrades, networks, etc. Communication Outcome, Problem Solving and Decision Making Outcome, Technological Literacy Outcome, Information Literacy Outcome, Transitional Strategy, Active Learning Strategy

7. Practice elements of the work ethic such as punctuality, professionalism, dependability, cooperation, and contribution. Personal Development Outcome

*Strategies and outcomes listed after instructional processes reference Pellissippi State’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 and networking fields. A,B,C,D,E
2. Identify ways to navigate the operating system and how to get to needed technical information. A,B,C
4. Understand the design goals of Windows NT Workstation. B,C
5. List the system requirements for NT Workstation. B,C,E,F
6. Understand the new features included in NT Workstation. B,C
7. Explain why NT Workstation is an important tool for network administrators C
8. Install Windows NT Workstation E
9. Troubleshoot NT Workstation installation problems. D
10. Log on and properly shut down Windows NT Workstation. C
11. Use and customize the taskbar. C
12. Customize the Start Button options. C
13. Set up a mapped drive from network neighborhood. C
14. Synchronize files with My Briefcase. C
15. Explain the contents of the Control Panel. C
16. Use the Display Icon to set up a screen saver or to adjust video settings. C
17. Use the Network Icon to set up IPX/SPX and TCP/IP network connectivity. B,C
18. Install a network service. B,C
19. Set up to use remote access and dial-up services. B,C
20. Connect to a database using the ODBC Icon. B,C
22. Install a tape drive. E
23. Discuss ways in which to use NT Workstation as a server. B,C
24. Create a user profile or a logon script. B,C
26. Set up an uninterruptable power supply. B,C,E
27. Install application software. E
28. Use a registry editor and make changes to the registry. B,C
29. Use the Task manager and the Performance Monitor to diagnose performance problems. B,C
30. Troubleshoot printer problems. D,C,D
31. Troubleshoot boot problems. B,C,D
33. Understand the components of a LAN. A
34. Describe the difference between coaxial and twisted pair cable. A
35. Comprehend the use of Ethernet and Token Ring networks. A
36. Understand network topologies. A
37. List the basic design principles of networking. A
38. Budget and determine the cost of a network. A
40. Choose a tape backup system. B,C
41. Install server components. B,C,E
42. Select a client operating system. B,C
43. Install an NIC driver. B,E
44. Resolve a resource conflict on a client. B,D
45. Set up a computer name for a client. B,C
46. Verify network parameters on a client. B,C
47. Plan for the NT client installation. A,B,C,E
48. Explain the differences in file systems used by Microsoft operating systems. A,B, C
49. Determine when to set up a network for workgroups or domains. B,C
50. Create accounts and groups by using the administration wizards. B,C,E
51. View, pause, cancel, and resume print jobs. B,C,E
52. Address workstation problems. A,B,C,D
53. Identify NIC problems. A,B,C,D

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

V. Evaluation:

A. Testing Procedures:

   There will be three tests which count 200 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 by the assigned deadline. This is a coordinated laboratory class, and assignments must be completed as scheduled.

C. Other Evaluation Methods:

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

D. Grading Scale:

   Grades will be assigned in accordance with the following scale:

   900 - 1000 pts.   A
   800 - 899 pts.    B
   700 - 799 pts.    C
   625 - 699 pts.    D
   0 - 624 pts.      F

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. 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.