DATE OF LAST REVIEW: 02/2013
CIP CODE: 47.0104
SEMESTER: Departmental Syllabus
COURSE TITLE: Operating Systems for PC Technicians
COURSE NUMBER: CRTE0106
CREDIT HOURS: 3
INSTRUCTOR: Departmental Syllabus
OFFICE LOCATION: Departmental Syllabus
OFFICE HOURS: Departmental Syllabus
TELEPHONE: Departmental Syllabus
EMAIL: KCKCC issued email accounts are the official means for electronically communicating with our students.
PREREQUISITE(S): CRT-0104 Computer Assembly and Troubleshooting for PC Technicians
REQUIRED TEXT AND MATERIALS:

Please check with the KCKCC bookstore, http://www.kckccbookstore.com/, for the required texts for your particular class.

COURSE DESCRIPTION:

In this class we will explain the purpose of an operating system. Describe and compare operating systems to include purpose, limitations, and compatibilities. Determine the operating system based on customer needs. Install an operating system. Navigate a GUI. Identify and apply common preventive maintenance techniques for operating systems. Troubleshoot operating systems. We will discuss the history of the operating system, Microsoft's End User Licensing Agreement and legal aspects of installing Windows. This course investigates the installation, configuration, and optimization of operating systems are examined in greater detail. There are various brands of operating systems available on the market today, including Microsoft Windows, Apple Mac OS, UNIX, and Linux. A technician must consider the current computer system when selecting an operating system. Additionally, there are several versions or distributions of an operating system. Some versions of Microsoft Windows include Windows 2000 Professional, Windows XP Home Edition, Windows XP Professional, Windows Media Center, Windows Vista Home Basic, Windows Vista Business, and Windows Vista Premium. Each of these operating systems offers many of the same features with a similar interface. However, some functions necessary for specific customer needs may not be available in all of them. You must be able to compare and contrast operating systems to find the best one based on your customer's needs. After completing this course, you will meet these objectives: Select the appropriate operating system based on customer needs. Install, configure, and optimize an operating system. Describe how to upgrade operating systems. Describe preventive maintenance procedures for operating systems. Troubleshoot operating systems.
METHOD OF INSTRUCTION: A variety of instructional methods may be used depending on content area. These include but are not limited to: lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, and panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:

I. Explain the purpose of an operating system
   A. Describe characteristics of modern operating systems
   B. Explain operating system concepts

II. Describe and compare operating systems to include purpose, limitations, and compatibilities
   A. Describe desktop operating systems
   B. Describe network operating systems

III. Determine operating system based on customer needs
   A. Identify applications and environments that are compatible with an operating system
   B. Determine minimum hardware requirements and compatibility with the OS platform

IV. Install and operating system
   A. Identify the hard drive setup procedures
   B. Prepare the hard drive
   C. Install the operating system using default settings
   D. Create accounts
   E. Complete the installation
   F. Describe custom installation options
   G. Identify the boot sequence files and Registry files
   H. Describe how to manipulate operating system files
   I. Describe directory structures

V. Navigate a GUI (Windows)
   A. Manipulate items on the desktop
   B. Explore control panel applets
   C. Explore administrative tools
   D. Install, navigate and deinstall an application
   E. Describe upgrading an operating system

VI. Identify and apply common preventive maintenance techniques for operating systems
   A. Create a preventive maintenance plan
   B. Schedule a task
   C. Backup the hard drive

VII. Troubleshoot operating systems
    A. Review the troubleshooting processing
    B. Identify common problems and solutions

VIII. Select the appropriate operating system based on customer needs
    A. Describe operating systems
    B. Describe network operating systems
    C. Install, configure, and optimize an operating system
    D. Compare and contrast a default installation and a custom installation
    E. Install Windows XP Professional using a custom installation
    F. Create, view, and manage disks, directories, and files
    G. Identify procedures and utilities used to optimize the performance of operating systems
    H. Identify procedures and utilities used to optimize the performance of browsers
I. Describe installation, use, and configuration of e-mail software
J. Set screen resolution and update video driver
K. Describe installation of a second operating system
IX. Describe how to upgrade operating systems
X. Describe preventive maintenance procedures for operating systems
   A. Schedule automatic tasks and updates
   B. Set restore points
XI. Troubleshoot operating systems
   A. Review the troubleshooting process
   B. Identify common problems and solutions
   C. Apply troubleshooting skills
   D. Remote Technician: Fix an Operating System Problem

LEARNER EXPECTATIONS:
A. The learner will be able to explain the purpose of an operating system
B. The learner will be able to describe and compare operating systems to include purpose, limitations and compatibilities
C. The learner will be able to determine operating system requirements based on customer needs
D. The learner will be able to demonstrate how to install an operating system
E. The learner will be able to demonstrate how to navigate a GUI (Windows)
F. The learner will be able to identify and apply common preventive maintenance techniques for operating systems
G. The learner will be able to troubleshoot operating installation issues
H. The learner will be able to select the appropriate operating system based on customer needs
I. The learner will be able to describe how to upgrade an operating system
J. The learner will be able to describe preventive maintenance procedures for operating systems
K. The learner will be able to troubleshoot the operating system.

COURSE COMPETENCIES:

Upon successful completion of this course:

*The learner will be able to explain the purpose of an operating system*
1. The learner will be able to describe characteristics of modern operating systems
2. The learner will be able to explain operating system concepts

*The learner will be able to describe and compare operating systems to include purpose, limitations and compatibilities*
3. The learner will be able to describe desktop operating systems
4. The learner will be able to describe network operating systems

*The learner will be able to determine operating system requirements based on customer needs*
5. The learner will be able to identify applications and environments that are compatible with an operating system.
6. The learner will be able to determine minimum hardware requirements and compatibility with the OS platform.

*The learner will be able to demonstrate how to install an operating system*
7. The learner will be able to identify the hard drive setup procedures
8. The learner will be able to prepare the hard drive
9. The learner will be able to install the operating system using default settings
10. The learner will be able to create accounts
11. The learner will be able to complete the installation
12. The learner will be able to describe custom installation options
13. The learner will be able to identify the boot sequence files and Registry files
14. The learner will be able to describe how to manipulate operating system files
15. The learner will be able to describe directory structures

The learner will be able to demonstrate how to navigate a GUI (Windows)

16. The learner will be able to manipulate items on the desktop
17. The learner will be able to explore control panel applets
18. The learner will be able to explore administrative tools
19. The learner will be able to install, navigate and deinstall an application
20. The learner will be able to describe upgrading an operating system

The learner will be able to identify and apply common preventive maintenance techniques for operating systems

21. The learner will be able to create a preventive maintenance plan
22. The learner will be able to schedule a task
23. The learner will be able to backup the hard drive

The learner will be able to troubleshoot operating installation issues

24. The learner will be able to review the troubleshooting processing
25. The learner will be able to identify common problems and solutions

The learner will be able to select the appropriate operating system based on customer needs

26. The learner will be able to describe operating systems
27. The learner will be able to describe network operating systems
28. The learner will be able to install, configure, and optimize an operating system
29. The learner will be able to compare and contrast a default installation and a custom installation
30. The learner will be able to install Windows XP Professional using a custom installation
31. The learner will be able to create, view, and manage disks, directories, and files
32. The learner will be able to identify procedures and utilities used to optimize the performance of operating systems
33. The learner will be able to identify procedures and utilities used to optimize the performance of browsers
34. The learner will be able to describe installation, use, and configuration of e-mail software
35. The learner will be able to set screen resolution and update video driver
36. The learner will be able to describe installation of a second operating system

The learner will be able to describe how to upgrade a operating system

37. The learner will be able to describe the steps required to upgrade an operating system

The learner will be able to describe preventive maintenance procedures for operating systems

38. The learner will be able to demonstrate the ability to schedule automatic tasks and updates.
39. The learner will be able to demonstrate the ability to set restore points.

The learner will be able to troubleshoot the operating system.

40. The learner will be able to review the troubleshooting process and apply it correctly to a problem.
41. The learner will be able to identify common problems and solutions with the operating system.
42. The learner will be able to apply appropriate troubleshooting skills diagnose a customer computer.
43. The learner will be able to fix an Operating System Problem remotely
ASSESSMENT OF LEARNER OUTCOMES:
Student progress is evaluated by means that include, but are not limited to, exams, written assignments, and class participation.

SPECIAL NOTES:
This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student’s progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty, and staff that is free of bigotry and discrimination. Kansas City Kansas Community College is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college’s policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap, or veteran status and that such policy be made known.

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