Course Description

CGS1560 | A+ Computer Operating Systems | 4.00 credits

This is a comprehensive course in the use of operating systems for microcomputers suitable for students seeking preparation for A+ operating system certification. Students will learn how to install, configure, use, manage, and troubleshoot the Disk Operating System (DOS), Microsoft Windows, and other microcomputer operating systems. Prerequisite: CGS1060 or computer experience is required.

Course Competencies:

Competency 1: The student will demonstrate an understanding of the development of the microcomputer operating systems by:

1. Describing the historical development of microcomputer operating systems
2. Identifying the fundamental principles of using microcomputers
3. Identifying the fundamental principles of using microcomputers
4. Describing how operating systems interact with the computer hardware
5. Identifying the various microcomputer operating systems
6. Describing the general features and uses of current operating systems

Competency 2: The student will demonstrate an understanding of operating system fundamentals by:

1. Identifying the major desktop components and interfaces and their functions
2. Differentiating the characteristics of Windows 9x/Me, Windows NT 4.0 Workstation, Windows 2000 Professional, Windows XP, Linux, and Mac OS
3. Identifying the names, locations, purposes, and contents of significant system files
4. Using command line functions and utilities to manage the operating system, including the proper syntax and switches
5. Creating, viewing, and managing disks, directories, and files, and changing file attributes
6. Identifying the primary operating system utilities, their purpose, location, and options

Competency 3: The student will demonstrate the ability to install, configure, and upgrade microcomputer operating systems by:

1. Installing Windows 9x/Me, Windows NT Workstation, Windows 2000 Professional, and Windows XP, and bringing the operating system to a basic operational level
2. Performing operating system upgrades from Windows
3. Creating an emergency boot disk with utilities installed for Windows 9x/Me, Windows NT 4.0 Workstation, Windows 2000 Professional, and Windows XP utilizing basic system boot sequences and boot methods
4. Installing and adding devices, including loading, adding, and configuring device drivers and required software
5. Optimizing the operating system and major operating system subsystems. ME, Windows NT 4.0 Workstation, Windows 2000 Professional, and Windows XP

Competency 4: The student will demonstrate the ability to diagnose and troubleshoot operating systems by:

1. Recognizing and interpreting the meaning of standard error codes and startup messages from the boot sequence and identifying steps to correct the problems
2. Recognizing when to use standard diagnostic utilities and tools
3. Selecting and using system utilities and tools to diagnose, troubleshoot, and resolve operating system problems
4. Detecting common operational and usability problems and determining proper methods for resolution

Competency 5: The student will demonstrate the ability to configure the network capabilities of Windows by:

1. Explaining the fundamental principles of networks
2. Identifying the basic Internet protocols and terminologies
3. Discussing the network protocols used by operating systems

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4. Explaining the networking features of operating systems
5. Configuring operating systems to connect to a local area network
6. Establishing Internet connectivity
7. Configuring operating systems to connect to and use Internet resources
8. Diagnosing and troubleshooting fundamental network connectivity problems
9. Diagnosing and troubleshooting fundamental Internet connectivity problems

Learning Outcomes:
- Formulate strategies to locate, evaluate, and apply information
- Use computer and emerging technologies effectively