

NOS 130 WINDOWS SINGLE USER

COURSE DESCRIPTION:

Prerequisites: None

Corequisites: None

This course introduces operating system concepts for single-user systems. Topics include hardware management, file and memory management, system configuration/optimization, and utilities. Upon completion, students should be able to perform operating systems functions at the support level in a single-user environment. Course Hours Per Week: Class, 2. Lab, 2. Semester Hours Credit, 3.

LEARNING OUTCOMES:

Upon completion of this course, students will be able to:

- a. Interact with operating system users to determine their needs
- b. Install windows desktop operating systems
- c. Setup user and group accounts
- d. Install, administer, and troubleshoot network printers
- e. Demonstrate the ability to install and utilize network utilities
- f. Configure basic IP addressing, netmasks, subnetting, and IP security
- g. Recommend network applications
- h. Troubleshoot common booting problems
- i. Troubleshoot network connectivity issues

OUTLINE OF INSTRUCTION:

- I. Windows Installation
 - a) Windows versions
 - b) Upgrading from previous versions
 - c) Installation sources
 - d) User profile and data migration
 - e) Active Directory and Group Policy integration
- II. System Images
 - a)

- f) Domain Image Deployment
 - i. Microsoft Deployment Toolkit (MDT)
 - ii. Windows Deployment Services (WDS)
 - iii. Deploying Images with WDS

III. Hardware and Applications

- a) Device Drivers: Managing, Staging, Configuration and Troubleshooting
- b) Partitions and Volumes: Creating, Resizing Volumes
- c) Disk Optimization: maintenance and quotas
- d) Removable Storage Policies and Group Policy Settings
- e) Application Compatibility
- f) User Account Control (UAC)
- g) Internet Options
- h) Internet Explorer (IE) 8: Security, InPrivate mode, Compatibility View
- i) Software Restriction Policies and AppLocker

IV. Networking

- a) IPv4 (Addresses, subnetting)
- b) IPv6 (Features, addresses, and implementation)
- c) IP Address Configuration for IPv4 and IPv6
- d) TCP/IP Troubleshooting Tools
- e) Configuring and Troubleshooting IPv4 and IPv6
- f) Configure IPv4 and IPv6 Settings
- g) Internet Connection Sharing (ICS)
- h) Wireless Networking (connecting, profiles)
- i) Windows Firewall and Advanced Security

V. Resource Access

- a) Authentication and Authorization
 - i. Authentication Management
 - ii. Using Credential Manager
 - iii. Using Run As
 - iv. Managing User Rights and Account Policies
 - v. Manage Account Policies
- b) NTFS Permissions
- c) Resource Sharing (Shared Folders, Libraries, HomeGroups)
- d) Printer Sharing and Management
- e) Auditing
- f) Encryption and Encrypting File System (EFS)
- g) BranchCache

VI. Mobile Computing

- a) Network Access Protection (NAP)
- b) Virtual Private Network (VPN) creation and configuration
- c) DirectAccess
- d) BitLocker and BitLocker To Go
- e) Mobility Options: tools, offline files, and power plans

VII. Monitoring and Maintenance

- a) Troubleshooting tools, configuring Services and Startup Items

- b) System Events: Event Viewer, Subscriptions
- c) Performance Monitoring
 - i. Performance Information and Tools Console
 - ii. Viewing the Windows Experience Index
 - iii. Windows Experience Index Facts
 - iv. Update the Windows Experience Index
 - v. Performance Monitor Console
 - vi. Monitoring Performance
 - vii. Windows Performance Toolkit (WPT)
- d) Resource Monitoring
 - i. Task Manager
 - ii. Resource Monitor and Process Explorer
- e) Reliability Monitor and Action Center
- f) Windows Defender
- g) Optimization
- h) System Updates
 - i. Windows Updates
 - ii. Configure Windows Update
 - iii. Update Deployment and Management
 - iv. Configuring WSUS Clients
 - v. Update Group Policy Settings
 - vi. Remote Management: Remote Desktop and Remote Assistance

VIII. Backup and Recovery

- a) System Backup
- b) File Recovery: Backups and Shadow Copies
- c) System Recovery and Restore Point

REQUIRED TEXTBOOK AND MATERIALS:

Text to be assigned by the instructor each semester

STATEMENT FOR STUDENTS WITH DISABILITIES:

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