SAN DIEGO COMMUNITY COLLEGE DISTRICT
CONTINUING EDUCATION
COURSE OUTLINE

SECTION I

SUBJECT AREA AND COURSE NUMBER

COMP 640

COURSE TITLE

WINDOWS OPERATING SYSTEMS

TYPE COURSE

NON-FEE   VOCATIONAL

CATALOG COURSE DESCRIPTION

This course includes the installation, configuration, and management of the Windows Desktop operating system. Students will also learn about managing applications, files and folders, devices, and the use of administrative tools and the control panel. Practical topics include user interfaces, user account management, operating system security, and basic network configuration. (FT)

LECTURE/LABORATORY HOURS

        120

ADVISORY

Microcomputer Basics or equivalent.

RECOMMENDED SKILL LEVEL

Possess a 10th grade reading level; ability to communicate effectively in the English language; knowledge of math concepts at the 8th grade level and basic computer literacy.

INSTITUTIONAL STUDENT LEARNING OUTCOMES

1. Social Responsibility
   SDCE students demonstrate interpersonal skills by learning and working cooperatively in a diverse environment.
2. Effective Communication
   SDCE students demonstrate effective communication skills.

INSTITUTIONAL STUDENT LEARNING OUTCOMES (CONTINUED)

3. Critical Thinking
    SDCE students critically process information, make decisions, and solve problems independently or cooperatively.
4. Personal and Professional Development
    SDCE students pursue short term and life-long learning goals, mastering necessary skills and using resource management and self-advocacy skills to cope with changing situations in their lives.

COURSE GOALS

1. Introduce the Windows Operating System environment.
2. Learn about the different editions of Windows.
3. Understand folders, files, and permissions.
4. Learn the use of administrative tools.
5. Learn the use of the control panel.
6. Learn how to setup and manage devices.
7. Learn to configure file backup and recovery.
8. Understand and manage appropriate security features.
9. Understand current industry standards, processes and techniques.

COURSE OBJECTIVES

Upon successful completion of this course, the student will be able to:
1. Describe the different editions of the Windows Operating System.
2. Demonstrate installation and upgrade of the Windows Operating System.
3. Demonstrate the use of administrative tools.
4. Demonstrate the use of the control panel.
5. Describe the types of user accounts and settings.
6. Demonstrate how to secure and share documents.
7. Demonstrate connecting and configuring external devices and drivers.
8. Demonstrate the installation and management of applications.
9. Demonstrate backing up and recovering data.

SECTION II

COURSE CONTENT AND SCOPE

1. Operating System Configurations
    1.1. Configure control panel options
        1.1.1. Administrative tools
        1.1.2. Accessibility options
    1.2. Configure desktop settings
        1.2.1. Gadgets
        1.2.2. Profiles
        1.2.3. Display settings

COURSE CONTENT AND SCOPE (CONTINUED)

        1.2.4. Shortcuts
        1.2.5. Aero configurations and capabilities
    1.3. Native applications and tools
        1.3.1. Windows Internet Explorer
        1.3.2. Snipping tool
        1.3.3. Windows Media Player
        1.3.4. Windows Media Center
        1.3.5. MSCONFIG
    1.4. Mobility
        1.4.1. Sync Center
        1.4.2. Windows Mobility Center
        1.4.3. Remote desktop
    1.5. Remote management and assistance
        1.5.1. MMC
        1.5.2. PowerShell
2. Installing and Upgrading Client Systems
    2.1. Windows Operating System editions
        2.1.1. System requirements
        2.1.2. PC Upgrade Advisor
    2.2. Upgrade paths
        2.2.1. Upgrade paths from other operating systems
        2.2.2. Application compatibility
    2.3. Installation types
        2.3.1. Removable media installations (DVD, ZTI, LTI, and USB)
        2.3.2. Cloud and network installations
        2.3.3. Product identification keys
    2.4. Virtualized clients
        2.4.1. Windows XP Mode
        2.4.2. Remote Desktop
        2.4.3. Remote Desktop Services
3. Managing Applications
    3.1. Application installations
        3.1.1. Local vs. network applications
        3.1.2. Group Policy
        3.1.3. Application removal
    3.2. User account control (UAC)
        3.2.1. Standard user vs. administrative user
        3.2.2. Types of UAC prompts and levels
    3.3. Malicious software mitigation
        3.3.1. Windows Defender
        3.3.2. Action Center
        3.3.3. Malicious Software Removal tool
        3.3.4. Windows Registry
        3.3.5. Microsoft Forefront Endpoint Protection
    3.4. System services
        3.4.1. Service start-up type
        3.4.2. Service accounts

COURSE CONTENT AND SCOPE (CONTINUED)

   3.4.3. Service dependencies
  3.5. Application virtualization
   3.5.1. Med-V
   3.5.2. Virtual desktop infrastructure (VDI)
4. Managing Files and Folders
  4.1. File systems
   4.1.1. FAT
   4.1.2. FAT32
   4.1.3. NTFS
   4.1.4. 32 bit vs. 64 bit
  4.2. File and print sharing
   4.2.1. NTFS and share permissions
   4.2.2. HomeGroups
   4.2.3. Print drivers
   4.2.4. Effective permissions
   4.2.5. Public, basic, and advanced shares
   4.2.6. Mapping drives
  4.3. Encryption
   4.3.1. BitLocker
   4.3.2. Encrypting file systems (EFS)
   4.3.3. Compression
  4.4. Libraries
   4.4.1. Offline files
   4.4.2. Multiple local locations in a library
   4.4.3. Networked locations
5. Managing Devices
  5.1. Connect devices
   5.1.1. Plug-and-play devices
   5.1.2. Printers
   5.1.3. Third-party software for devices
  5.2. Storage
   5.2.1. Disk types
   5.2.2. Disk security
   5.2.3. Storage device types
   5.2.4. Storage drive types
   5.2.5. Cloud storage
  5.3. Printer devices
   5.3.1. Local printers
   5.3.2. Network printers
   5.3.3. Print queues
   5.3.4. Print-to-file
   5.3.5. Internet printing
  5.4. System devices
   5.4.1. Video
   5.4.2. Audio
   5.4.3. Infrared input devices
   5.4.4. Device Manager

COURSE CONTENT AND SCOPE (CONTINUED)

6. Operating System Maintenance
    6.1. Backup and recovery methods
          6.1.1. Local backup
          6.1.2. Online backup
          6.1.3. Automated backup
          6.1.4. Backup options
          6.1.5. System restore
          6.1.6. Recovery boot options
          6.1.7. Safe mode options
    6.2. Maintenance tools
          6.2.1. Disk defragmenter
          6.2.2. Disk cleanup
          6.2.3. Task scheduler
          6.2.4. Action center
          6.2.5. System information
    6.3. Updates
          6.3.1. Windows updates
          6.3.2. Microsoft updates
          6.3.3. Hotfixes

APPROPRIATE READINGS

Appropriate readings may include, but are not limited to, periodicals, magazines, instructor-written materials, manuals, instructor selected URLs, and publications related to the implementation of desktop operating systems.

WRITING ASSIGNMENTS

Appropriate writing assignments may include, but are not limited to, preparing text for an assigned project, keeping a journal on all laboratory and project work, and completing all assigned reports.

OUTSIDE ASSIGNMENTS

Outside assignments may include, but are not limited to, reading texts and reference resources; research as needed to complete projects; and organizing and preparing written answers to assigned questions.

APPROPRIATE ASSIGNMENTS THAT DEMONSTRATE CRITICAL THINKING

Assignments which demonstrate critical thinking may include, but are not limited to, analysis and evaluation of assigned text and reference resources, and utilize this analysis in classroom discussions, writing assignments, and in performing laboratory activities. Students must select and use appropriate methods and resources to complete laboratory assignments.

EVALUATION

A student's grade will be based on multiple measures of performance and will include evaluation of student's ability to:

1. Perform in a variety of activities and assignments.
2. Complete written and practical examinations.
3. Contribute to class and group discussions.
4. Maintain attendance and punctuality per current policy.
5. Demonstrate ability to work independently and as a team member.

Upon successful completion of each course in the program, a Certificate of Course Completion will be issued. Upon successful completion of both courses included in the program, a Certificate of Program Completion will be issued.

METHOD OF INSTRUCTION

Methods of instruction may include, but are not limited to, lectures, discussion, hands-on demonstrations, computer-assisted instruction, laboratory assignments and field trips. This course, or sections of this course, may be offered through distance education.

TEXTS AND SUPPLIES

Exam 98-349: MTA Windows Operating System Fundamentals, MOAC, John Wiley & Sons, Inc., current edition
Microsoft Windows Operating System Essentials, Tom Carpenter, John Wiley & Sons, Inc., current edition
Supporting Windows 7, Jean Andrews, Cengage, current edition

Web Resources: http://technet.microsoft.com/en-us/; http://www.windowsnetworking.com/; http://www.microsoftvirtualacademy.com/; http://www.gmetrix.com/mtatests/; http://www.techrepublic.com/

Supplies: Journal (composition book), USB Drive or other storage media

PREPARED BY: ___Richard Gholson_____   DATE: ___10/31/2014_____

REVISED BY: ____Richard Gholson_____ DATE: ____12/6/16_____

Instructors must meet all requirements stated in Policy 3100 (Student Rights, Responsibilities and Administrative Due Process), and the Attendance Policy set forth in the Continuing Education Catalog.

REFERENCES:

San Diego Community College District Policy 3100
California Community Colleges, Title 5, Section 55002
Continuing Education Catalog