GROSSMONT COLLEGE

OFFICIAL COURSE OUTLINE

Curriculum Committee Approval: 04/20/2021

GCCCD Governing Board Approval: 05/18/2021

COMPUTER SCIENCE INFORMATION SYSTEMS 112 – WINDOWS OPERATING SYSTEMS

# 1. Course Number Course Title Semester Units

CSIS 112 Windows Operating Systems 3

Semester Hours

3 hours lecture 48-54 total hours 96-108 outside-of-class hours 144-162 total hours

2. Course Prerequisites

None

Corequisite

None

Recommended Preparation

None

# 3. Catalog Description

This course introduces the Microsoft Windows family of operating systems concentrating primarily on the most current version. Coverage begins with the desktop graphical user interface and ends with the configuration and maintenance of Windows as might be required of a home or small business user. Topics will include hardware and software installation maintenance, networking, mobile computing, security and file sharing, administrative tools, scripting and batch files, and maintenance and performance tuning. The course will also cover file systems, storage devices, communication devices, command line options, registry repairs, disaster recovery, and troubleshooting.

# 4. Course Objectives

The student will:

1. Compare and evaluate the evolution of Microsoft operating systems from DOS through the current Windows version.
2. Demonstrate the Graphical User Interface
3. Analyze hardware and software requirements and installation issues.
4. Discussmulti-boot options and partitions.
5. Explain the various networking models.
6. Analyze options for security.
7. Demonstrate administration and management tools.
8. Discuss backup and recovery.
9. Demonstrate performance options and tuning.
10. Explain file storage and systems.
11. Demonstrate command-line and automation tools.
12. Explain the use of the Registry including structure and keys using Registry Editor.
13. Change and restore Internet options.
14. Analyze troubleshooting protocols.

# 5. Instructional Facilities

1. Computer lab with Internet access and appropriate software.
2. A LCD projection from a standard PC computer output.

6. Special Materials Required of Student

Removable storage media compatible with lab computers.

# 7. Course Content

1. Evolution installation of operating systems versions from DOS through Windows XP.
   1. Microsoft operating systems overview DOS/Win16/Win32.
   2. Alternative operating system to windows; MAC OS and Linux.
   3. Dual boot options.
   4. Architecture and file systems; FAT16, FAT32, and NTFS.
   5. Upgrades and new installations.
2. Hardware and software requirements.
   1. Installing and removing hardware.
   2. Disk management.
   3. Installing and removing applications.
3. Networking models.
   1. Shared folders.
   2. Network and local printer configuration and installation.
   3. Network protocols.
   4. TCP/IP configuration.
4. Security.
   1. Customizing and authenticating logon procedures.
   2. Local security policies.
   3. Domain security.
   4. File encryption.
   5. NTFS permissions.
   6. Remote access service.
   7. Bindings.
   8. User Account Control (UAC)
5. Administration and management tools.
   1. Management console.
   2. Task scheduler.
   3. Control panel.
   4. Task manager.
   5. System monitor.
   6. Event viewer.
6. Backup and recovery.
   1. Recovery console.
   2. Emergency repair process.
   3. Obtaining applying service packs and hotfixes.
   4. File system vs. system backup; Microsoft backup vs. ghosting software.
7. Performance options and tuning.
   1. Recognizing bottlenecks.
   2. Defrag.
   3. Default user accounts.
   4. Adding user and group accounts.
   5. User profiles/user and group scripting.
   6. INI files.
8. File storage.
9. Batch files.
10. Registry overview including structure and keys.
    1. Regedit/Rgedit32.
    2. Backup and restore registry.
11. Internet options.

Internet Explore configuration.

1. Remote Assistance
2. Remote Desktop

# 8. Method of Instruction

a. Interactive lecture and demonstration using instructor workstation in a traditional classroom or via electronic means.

b. Directed hands-on exercises.

c. Class discussion of current operating systems trends and issues

# 9. Methods of Evaluating Student Performance

1. Directed hands-on projects and exercises.
2. Objective exams.
3. Completing tutorials and problems utilizing the current operating system.
4. Demonstrating skills achieved through objective exams on concepts and terminology.
5. Final exam consisting of a comprehensive problem solution utilizing the current PC operating system.

# 10. Outside Class Assignments

1. Textbook reading assignments and exercises.
2. Problem solving exercises, such as Troubleshooting and analyzing operating system scenarios, investigating potential alternatives, and implementing action to achieve a determined result.
3. Preparing batch and scripting files.
4. Hands-on configuration and installation practice.
5. Respond to other students’ analysis and comments on the class discussion board.

# 11. Representative Texts

a. Representative Text(s):

Parsons, June Jamrich, Oja, Dan, and Ruffolo, Lisa. *New Perspectives – Windows 10 Comprehensive*. Boston, MA: Cengage Learning, 2017.

b. Supplementary texts and workbooks:

None

# Addendum: Student Learning Outcomes

Upon completion of this course, our students will be able to do the following:

1. Assess the capability of a computer currently running an older version of the Windows Operating System and, if capable, install or upgrade the latest Windows Operating System on that computer.
2. Customize the Windows Operating System’s Graphical User Interface and navigate and experiment with its many features.
3. Describe the best practices for the Windows Operating System’s File Management system and create a file management structure that conforms to these best practices.