MASTER COURSE OUTLINE

Prepared By: Tom Willingham   Date: October 2018

COURSE TITLE

Intro to Computer Operating Systems

GENERAL COURSE INFORMATION

Dept.: CS	Course Num: 105	(Formerly:)
CIP Code: 11.0901	Intent Code: 21	Program Code: 527
Credits: 3		

Total Contact Hrs Per Qtr.: 33

Lecture Hrs: 33	Lab Hrs:	Other Hrs:

Distribution Designation: General Elective (GE)

COURSE DESCRIPTION (as it will appear in the catalog)

An introduction to operating systems (O/S) design, structure, and mechanisms. Topics include computer software systems performance, memory, kernel structure, input/output (I/O) devices, file system functions, virtualization, and securing the operating system.   Students will install and configure major modern client operating systems Students completing CS 104 and CS 105 will have the knowledge and skills necessary for CompTIA A+ Certification exam preparation.

PREREQUISITES

None

TEXTBOOK GUIDELINES

Textbook to be determined by CS Faculty. (Example: *Mike Meyers' CompTIA A+ Guide to Managing and Troubleshooting PC's* and *Mike Meyer's CompTIA A+ Guide to Managing and Troubleshooting PCs Lab Manual*)

COURSE LEARNING OUTCOMES

Upon successful completion of the course, students should be able to demonstrate the following knowledge or skills:

1. Explain the objectives and functions of modern operating systems
2. Describe how operating systems have evolved over time
3. Effectively manage main memory and improve the utilization of the CPU speed and response
4. Install devices and drivers
5. Describe how the file system, mass storage, and I/O are handled in a modern computer system
6. Perform disk maintenance including defragmenting, relocating files and folders, running disk and file repair utilities and selecting RAID options
7. Differentiate between single user and multi-user operating systems
8. Explain the concept of virtual memory and how it is realized in hardware and software
9. Carry out simple *sys admin* tasks according to a security policy, i.e., creating accounts, setting permissions, applying patches, and arranging for regular backups
10. Complete an installation and configure Microsoft Windows operating systems
11. Find and install updates
12. Compare and contrast current methods for implementing security

INSTITUTIONAL OUTCOMES

COURSE CONTENT OUTLINE
1. Operating systems overview
2. Operating system structures
3. Processes and process management
4. CPU scheduling
5. File system maintenance
6. Installing and upgrading operating systems
7. Configuring and managing input and output devices
8. Using and configuring storage devices
9. Modems, wireless, and other communications devices
10. Memory management
11. Network connectivity
12. Sharing disks, files, and printers over a network
13. Security and protection
14. System performance evaluation

DEPARTMENTAL GUIDELINES *(optional)*
CS 104 and CS 105 are linked courses. Students will be automatically enrolled in both courses. Course instruction in CS 104 and CS 105 prepares students for the CompTIA certification exam.

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DIVISION CHAIR APPROVAL   **DATE**