



## MASTER COURSE OUTLINE

Prepared By: Tom Willingham

Date: October 2018

## COURSE TITLE

Linux Server Administration

## GENERAL COURSE INFORMATION

|   |                 |  |
|---|-----------------|--|
| Dept.: CS                                       | Course Num: 206 | (Formerly: Unix/Linux Server Administration) |
| CIP Code: 11.0901                               | Intent Code: 21 | Program Code: 527                            |
| Credits: 5                                      |                 |  |
| Total Contact Hrs Per Qtr.: 66                  |                 |  |
| Lecture Hrs: 44                                 | Lab Hrs: 22     | Other Hrs:                                   |
| Distribution Designation: General Elective (GE) |                 |  |

## COURSE DESCRIPTION (as it will appear in the catalog)

In this course students will customize the BASH environment, build shell scripts in the Korn shell, control the Linux system, manage user accounts, manage system software in Linux, and manage file systems in Linux. Students will also troubleshoot the system, configure the client/server environment, apply security practices to Linux systems, and improve system performance.

## PREREQUISITES

CS 105  
CS 205 recommended

## TEXTBOOK GUIDELINES

Textbook and materials to be determined by CS Faculty

## COURSE LEARNING OUTCOMES

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

1. Describe the Linux Operating System
2. Install and configure a Linux Server OS
3. Install common Web applications
4. Log in and out of a Linux system
5. List, open, move, copy and set permissions on data and program files in a terminal environment
6. Access programs and manipulate windows using a Linux based Graphical User Interface
7. Configure mail, write and talk commands
8. Communicate with the electronic mail system
9. Remotely access other systems over the network
10. Operate commonly used shell commands from both a terminal and graphical user interface
11. Configure alias mechanism, pipes, filters and I/O redirection
12. Enter and edit scripts using the "vi" (or comparable) text editor
13. Set up and customize the shell environment
14. Compose simple shell scripts and run them

## INSTITUTIONAL OUTCOMES

## **COURSE CONTENT OUTLINE**

1. A short history of Linux and open source software
2. Introduction to networking concepts
3. Installing a Linux Server
4. Configuring a Linux Server
5. Installing and configuring applications and services
6. Managing users
7. Administration with Shell Scripts
8. Maintaining a Linux Server
9. Installing some common Web applications
10. Installing OpenBSD
11. Configuring OpenBSD
12. Using OpenBSD as a Firewall with PF

## **DEPARTMENTAL GUIDELINES** *(optional)*

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**DIVISION CHAIR APPROVAL**

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**DATE**