



South Central College

COMP 2460 Linux Administration

Course Outcome Summary

Course Information

Description	The Linux operating system is extremely popular in the world of servers and the internet and is gaining ground on the desktop. This course takes a student through the Linux operating system from learning how to use the command line and text-based shells through the administration of network services. Major topics include file management, user management, shell scripting and popular programming languages, system administration including print services and telnet, SSH, FTP, HTTP, NFS, and Samba services. (Prerequisites: COMP 1200 and COMP 1360)
Total Credits	4
Total Hours	64

Types of Instruction

Instruction Type	Credits/Hours
Lecture	4/64

Pre/Corequisites

COMP 1200

COMP 1360

Institutional Core Competencies

Critical and Creative Thinking - Students will be able to demonstrate purposeful thinking with the goal of using a creative process for developing and building upon ideas and/or the goal of using a critical process for the analyzing and evaluating of ideas.

Course Competencies

1. Install and configure the Linux operating system

Learning Objectives

Determine hardware requirements

Plan disk partitioning

Choose appropriate installation media

Install the operating system

Perform initial configuration of the operating system

2. Work with common Linux graphical user interfaces

Learning Objectives

Configure the desktop
Start and stop the X server
Configure X Windows

3. Work with the bash shell

Learning Objectives

Initiate a text-based command line session
Navigate through the file system
Perform file utility operations
Create and edit files

4. Configure and manage printing services

Learning Objectives

Install and configure local printers
Manage print jobs

5. Manage users

Learning Objectives

Add new users
Manage existing users
Remove users
Manage file security permissions
Manage the shadow password system
Grant temporary system administrator privileges

6. Automate common system tasks

Learning Objectives

Manage run levels
Configure processes to start at system boot time
Start and stop services manually
Schedule tasks
Initiate and manage background tasks

7. Manage CPU processes

Learning Objectives

Manage process priority
Terminate processes

8. Manage backup files

Learning Objectives

Choose an appropriate backup strategy
Choose an appropriate backup media
Create and manage archives using backup utility software
Restore system and data files from an archive

9. Configure networking services

Learning Objectives

Configure network interfaces
Manage DHCP
Troubleshoot network problems

10. Install and configure common services

Learning Objectives

Configure remote access using SSH
Install, configure, and manage a web server
Install, configure, and manage a database management system
Install, configure, and manage remote print services

- Configure and manage network file services
- Configure and manage FTP services
- Configure and manage electronic mail services
- Configure and manage a proxy server
- Configure and manage DNS

11. Develop simple software applications

Learning Objectives

- Write simple shell scripts
- Write simple Perl scripts
- Write simple Python scripts
- Write simple PHP scripts
- Write simple C language programs

12. Manage system security

Learning Objectives

- Assess system vulnerability
- Configure and manage security software
- Develop a disaster recovery plan

13. Manage software

Learning Objectives

- Install, update, and remove software using the Red Hat Package Manager
- Install, update, and remove software using YUM
- Customize YUM

14. Manage file systems

Learning Objectives

- Explain how data is physically stored on media
- Describe the characteristics of the ext2 and ext3 file systems
- Describe the characteristics of the FAT32 file system
- Describe the characteristics of the ISO9660 file system
- Create a new file system
- Mount and unmount a file system manually
- Manage the automatic mounting and unmounting of file systems
- Manage logical volumes using LVM

SCC Accessibility Statement

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