



# Wayne County Community College District

## COURSE SYLLABUS

### CIS 212 Linux

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**CREDIT HOURS:** 4.00

**CONTACT HOURS:** 60.00

**COURSE DESCRIPTION:**

In this course students will define and identify origins, benefits, drawbacks, and uses of the Linux operating system. The students will log in, enter commands, shut down and restart your Linux workstation, create and configure users and groups, and manage the file system. The students will use Linux text editors and redirection to create and modify files, archive files with tar, cpio, and other commands. The students will work in the X Window environment, manage print services, and add and update packages through package management utilities.

**PREREQUISITES:** CIS 110, CIS 210

**EXPECTED COMPETENCIES:**

Upon completion of this course, the student will be familiar with:

- 1. Introduction to Linux**
  - a. Explain the operating system
  - b. Describe the benefits and uses of the operating system
  - c. Discuss the history and development
- 2. Preparing for Linux Installation**
  - a. Understand computer hardware components
  - b. Understand software components
- 3. Linux Installation and Usage**
  - a. Understand Installation process
  - b. Generate basic Linux commands
- 4. Exploring Linux File Systems**
  - a. Describe Linux file system
  - b. Execute commands to view and edit files
- 5. Linux File Management**
  - a. Use commands that manage file systems
  - b. Describe how to link files and set permissions
- 6. Linux File System Administration**
  - a. Describe how to create, mount and manage files
  - b. Describe other file systems
- 7. Advanced Installation**
  - a. Describe advanced hardware concepts and configurations
  - b. Describe alternate methods of installing Linux
- 8. Working with the BASH Shell**
  - a. Describe features of BASH shell
  - b. Use redirection, piping, variables and basic shell scripts
- 9. System Initialization and X Windows**
  - a. Describe various boot loaders
  - b. Understand daemons
- 10. Managing Linux Processes**
  - a. Explain the different types of processes
  - b. Change priorities and attributes
  - c. Describe the advantages and disadvantages of direct conversion, parallel conversion, phased conversion, and pilot conversion.



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#### **11. Common Administrative Tasks**

- a. Perform user administration
- b. Describe printer administration
- c. Explain log file administration
- d. Describe various ways to provide access to databases via the Web.
- e. Explain how to design an effective relational database.

#### **12. Compression, System Backup, and Software Installation**

- a. Describe Linux Utilities
- b. Install software

#### **13. Troubleshooting and Performance**

- a. Discuss system maintenance cycle
- b. Assess performance problems

#### **14. Network Configuration**

- a. Configure TCP/IP
- b. Configure name resolution

#### **15. Configuring Network Services and Security**

- a. Configure firewall
- b. Configure routing

#### **ASSESSMENT METHODS:**

Student performance may be assessed by examination, quizzes, case studies, oral conversation, group discussion, oral presentations. The instructor reserves the option to employ one or more of these assessment methods during the course.

#### **GRADING SCALE:**

90%-100% = A  
80%-89.9% = B  
70%-79.9% = C  
60%-69.9% = D  
<60% = E