

CIS 179L : LINUX ESSENTIALS

Transcript title

Linux Essentials

Credits

4

Grading mode

Standard letter grades

Total contact hours

50

Lecture hours

30

Other hours

20

Prerequisites

CIS 120 or CIS 124 or COCC Computer Competency.

Course Description

Introduces Linux and helps students to 1) understand Linux and the open source industry while providing knowledge of the most popular open source applications; 2) understand the major components of the Linux operating system and have the technical proficiency to work on the Linux command line; and, 3) understand the basics of security and administration related topics such as user/group management, working on the command line, and permissions.

Course learning outcomes

1. Explain the history of open-source development and the major Linux distributions used today.
2. Demonstrate knowledge of Linux basics to run applications, navigate, and manage files and directories.
3. Illustrate techniques for using the command line to archive files, extract data, and run scripts.
4. Summarize the differences between Windows, OS X, and Linux; and, how hardware is managed in each operating system.
5. Implement basic security in Linux based on user types, groups, file permissions, and ownership.

Content outline

1.1 Linux Evolution and Popular Operating Systems 1.2 Major Open Source Applications 1.3 Open Source Software and Licensing 1.4 ICT Skills and Working in Linux 2.1 Command Line Basics 2.2 Using the Command Line to Get Help 2.3 Using Directories and Listing Files 2.4 Creating, Moving and Deleting Files 3.1 Archiving Files on the Command Line 3.2 Searching and Extracting Data from Files 3.3 Turning Commands into a Script 4.1 Choosing an Operating System 4.2 Understanding Computer Hardware 4.3 Where Data is Stored 4.4 Your Computer on the Network 5.1 Basic Security and Identifying User Types 5.2 Creating Users

and Groups 5.3 Managing File Permissions and Ownership 5.4 Special Directories and Files

Required materials

1. Students will need frequent access to a computer under which they have administrative rights to configure the computer fully.
2. Students will need frequent and reliable access to the Internet in order to conduct research, participate with the class online using cloud technologies, and access the Pioneer Data Center via a secure VPN connection.
3. Students will need access to the course training materials, textbooks, software, online resources as determined in the course syllabus.