

COCONINO COMMUNITY COLLEGE
COURSE OUTLINE

Prepared by: Bill Branch, Dave Bowman
Revised by: Bill Branch, Dave Bowman
Reviewed by: Bill Branch, Dave Bowman
Revised by: Dave Bowman
Revised by: Jeff Jones
Revised by: Bill Branch
Revised by: Bill Branch
Status: Permanent
Effective: Fall 2017

October, 03, 2001
Fall 2003
Fall 2009
Spring 2012
12/15/2014
December 21, 2016
February 9, 2017

A. Identification:

1. Subject Area: Computer Information Systems (CIS)
2. Course Number: 171
3. Course Title: Linux Administration II
4. Credit Hours: 4
5. Course Description: This is the second of two semester courses designed to provide students with classroom and lab experience in current and emerging Linux Administration employment or further education and training in the Linux administration/networking field. This course is aligned with the second of two exams to achieve both the CompTIA Linux+ certification and Linux Professional Institute LPIC-1 certification. This course explores deeper features of Linux based shells and scripting, data management, complex system processes and system security. Co-requisite: CIS 161 or Consent of Instructor. May be taken for S/U. Four Lecture.

B. Course Goals: To provide the students with hands on experience with Linux Administration, files and directories, and network management tools. Furthermore, the class will provide the logical background for understanding the implementation and troubleshooting of small to medium networks managed with Linux operating systems.

C. Course Outcomes:

Upon successful completion of this course, student will:

1. customize and use the shell environment;
2. customize or write simple scripts;
3. explain and demonstrate common SQL data management processes;
4. install and configure X11;
5. setup and manage a display manager;
6. demonstrate knowledge and awareness of accessibility technologies;
7. manage user and group accounts and related system files;
8. automate system administration tasks by scheduling jobs;
9. maintain system time with NTP protocol;
10. explain the need system logging and configure system logging;
11. configure and troubleshoot Mail Transfer Agent (MTA) basics;
12. configure and manage printers and printing with CUPS and legacy LPD;
13. demonstrate and explain the fundamentals of internet protocols within the TCP/IP framework;
14. configure and troubleshoot network configurations and troubleshooting with IPv4, IPv6, DHCP and DNS;
15. perform security administration tasks;

16. and secure data with encryption

D. Course Outcomes Assessment will include:

1. self-assessment chapter quizzes;
2. web based chapter exams;
3. hands-on lab assessment for each applicable chapter;
4. web Final Exam covering material from the entire semester;
5. and final Practical Exam (Hands-on in a Linux based environment).

E. Course Content will include:

1. shells;
2. scripting;
3. data management;
4. user interface and desktops;
5. administrative tasks;
6. essential systems services;
7. networking;
8. and security.