J. Sargeant Reynolds Community College
Course Content Summary

Course Prefix and Number: ITN 170   **Credits:** 3

Course Title: Linux System Administration

Course Description: Focuses instruction on the installation, configuration, and administration of the Linux operating system and emphasizes the use of Linux as a network client and workstation. Lecture 3 hours per week.

General Course Purpose: Prepares students to manage Linux computers in a networked environment. Can lead to industry certification. Serves as either a requirement or elective for designated Information Systems Technology programs.

Course Prerequisites and Co-requisites:
None

Student Learning Outcomes:
Upon completing the course, the student will be able to
a. Install common Linux distributions;
b. Automate the installation of Linux through the use of "kick start" scripts;
c. Modify and maintain system configuration files and startup scripts;
d. Install and maintain software applications;
e. Administer user and group accounts;
f. Configure and control hardware devices;
g. Integrate Linux as a client within an existing network;
h. Configure TCP/IP network parameters;
i. Configure client software;
j. Configure and use the X-Window system;
k. Perform basic troubleshooting;
l. Configure basic host security;
m. Compile and install a custom Linux kernel;
n. Describe and identify the run levels 0-6; and
o. Configure printing (local and network).

Major Topics to Be Included:
a. Installation of Linux
b. System initialization scripts
c. Installation and upgrade of system software
d. Compiling system software from source code
e. User administration
f. Installing and configuring hardware devices
g. Installing and configuring print services
h. Network configuration
i. Utilizing network services
j. Configuration of X-Windows
k. Troubleshooting system failures
l. System security

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