Department Master Syllabus
Camden County College
Blackwood, New Jersey

Course Title: Linux/UNIX Essentials

Course Number: CIS-181

Department/Program Affiliation: Computer Information Systems

Date of Review:
(This Department Master Syllabus has been examined by the program/department faculty members and it is decided that no revision is necessary at this time.)

Date of Last Revision: April, 2018
(This Department Master Syllabus has been examined by the program/department faculty members and it is decided a change requiring a revision is necessary at this time.)

N.B. A change to the course materials alone (textbooks and/or supplementary materials) may not constitute a revision. Any other change to the items listed below on this form is considered a revision and requires approval by the program faculty at a Program/Department Meeting and by the division at a Chairs and Coordinator Meeting.

Credits: 3

Contact Hours: Lecture__3__ Lab__0__ Other _0___

Prerequisites: Background using computers from work experience or course academic work

Co-requisites: none

Course Description: This course is designed to give the student a working knowledge of the Linux/UNIX operating system. It does not assume any prior knowledge of Linux and is geared toward those interested in systems administration as well as those who will use or develop programs for Linux systems. The course provides comprehensive coverage of topics related to Linux certification, including Linux distributions, installation, administration, X-Windows, networking, and security. The student will learn a variety of standard Linux/UNIX basic commands, how to work with files and directories, standard input/output and I/O redirection, standard error, pipes, basic protection/permission features for files, and use both full and relative path names in a file system. The features of the major shells will be described. The *vi editor* will be explored. This course is taught in a room with computers for the explicit teaching of a computer skill set using lecture. Computers are used as a lecture tool to provide demonstrations and illustrations of the technical concepts taught. Access to computers provides the students with the opportunity of interacting with the concepts presented. No graded assignments or mandatory exercises are completed during the lecture. Hands-on assignments are completed outside of class.

Course Student Learning Outcomes: (Cognitive, Psychomotor, Affective Domains)

Upon completion of this course, the student will be able to:

1. Explain the Linux/UNIX hierarchical file structure as assessed by hands-on activities, tests, class participation, projects, homework assignments, etc.

2. Describe the features of the major shells as assessed by hands-on activities, tests, class participation, projects, homework assignments, etc.
3. Identify, create and use different file types as assessed by hands-on activities, tests, class participation, projects, homework assignments, etc.
4. Demonstrate the basic protection/permission features of user logins and files as assessed by hands-on activities, tests, class participation, projects, homework assignments, etc.
5. Perform basic file-editing operations using vi as assessed by hands-on activities, tests, class participation, projects, homework assignments, etc.
6. Employ a variety of standard Linux/UNIX commands for file management and other tasks assessed by hands-on activities, tests, class participation, projects, homework assignments, etc.
7. Understand and navigate the Linux directory structure using relative and absolute pathnames as assessed by hands-on activities, tests, class participation, projects, homework assignments, etc.
8. To use streams, pipes, and redirects as assessed by by hands-on activities, tests, class participation, projects, homework assignments, etc.
9. Utilize the filters of tee, awk, grep, sort, cut, paste and the pipe mechanism as assessed by hands-on activities, tests, class participation, projects, homework assignments, etc.
10. Illustrate user environment customization using variables as assessed by hands-on activities, tests, class participation, projects, homework assignments, etc.
11. Communicate announcements using various commands as assessed by hands-on activities, tests, class participation, projects, homework assignments, etc.
12. To write simple shell scripts as assessed by hands-on activities, tests, class participation, projects, homework assignments, etc.

General Education Student Learning Outcomes (if applicable):

Course Outline:

- Introduction to Linux
- Linux Installation and Usage
- Exploring Linux Filesystems
- Linux Filesystem Management
- Linux Filesystem Administration
- Working with the BASH Shell

Course Activities: The classroom activities will include formal and informal lectures where new material and assigned problems will be explained. Students will have the opportunity to contribute to the discussion and to ask questions about the material. "Hands-on" work on the computer will be done outside of regularly scheduled classroom hours.

Assessment of Student Learning Outcomes: The student will be evaluated on the degree to which the above student learning outcomes are achieved. A variety of methods may be used such as tests, class participation, projects, homework assignments, etc.

Course Materials:

Textbook(s): Jason W. Eckert, *Linux+ Guide to Linux Certification, Fourth Edition.* Course Technology, Cengage Learning, 2016, ISBN-13 978-1-305-10716-8.

Supplemental Materials: This information will be provided by the instructor on the first day of class.