CRN165 Network Operating Systems II Syllabus

Course Information

Credits 3
Campus Washburn Institute of Technology
Address 5724 SW Huntoon
City/State/Zip Topeka, Kansas 66604
Office Fax 785-273-7080

Description
This course introduces students to a broad range of Network Operating System (NOS) concepts, including installation and maintenance. The course focus is on Linux Network Operating System concepts, management, maintenance, and the required resources.

Textbooks

Student Learning Outcomes:
A. Communicate effectively
B. Integrate technology
C. Learn effectively
D. Demonstrate cooperative teamwork skills
E. Apply safety in the workplace
F. Think critically and creatively
G. Demonstrate responsible work ethics

Competencies

1 System Architecture
1.1 Determine and configure hardware settings
1.2 Boot the system
1.3 Change runlevels and shutdown or reboot system
2 Linux Installation and Package Management
2.1 Design hard disk layout
2.2 Manage shared libraries
3 GNU and Unix Commands
3.1 Work on the command line
3.2 Process text streams using filters
3.3 Perform basic file management
3.4 Use streams, pipes and redirects
3.5 Create, monitor and kill processes
3.6 Modify process execution priorities
3.7 Search text files using regular expressions
3.8 Perform basic file editing operations using vi

4 Devices, Linux Filesystems, Filesystem Hierarchy Standard
4.1 Create partitions and filesystems
4.2 Maintain the integrity of filesystems
4.3 Control mounting and unmounting of filesystems
4.4 Manage disk quotas
4.5 Manage file permissions and ownership
4.6 Create and change hard and symbolic links
4.7 Find system files and place files in the correct location

5 Shells, Scripting and Data Management
5.1 Customize and use the shell environment
5.2 Customize or write simple scripts
5.3 SQL data management

6: User Interfaces and Desktops
6.2 Setup a display manager
6.3 Accessibility

7 Administrative Tasks
7.1 Manage user and group accounts and related system files
7.2 Automate system administration tasks by scheduling jobs

8 Essential System Services
8.1 Maintain system time
8.2 System logging
8.4 Manage printers and printing

9 Networking Fundamentals
9.1 Fundamentals of internet protocols
9.2 Basic network configuration
9.3 Basic network troubleshooting
9.4 Configure client side DNS

10 Security
10.1 Perform security administration tasks

Guidelines for Success

Assessment Plan
Assessment is an integral part of the educational process at Washburn Tech and accurate feedback is an important tool in continuously improving the institution's technical programs. Students can expect to participate in assessment activities prior to entry into programs, within specific courses and following program completion for specific fields of study.

Grading Rationale and Grading Scale
Grading Criteria
90% or above A
80% - 89% B
70% - 79% C
60% - 69% D
Below 60% F

Students must have a cumulative 2.0 (on a scale of 4.0) grade point average (GPA) after the first year's courses in order to return for the second year. Students must have a cumulative 2.0 (on a scale of 4.0) grade point average after the second year in order to graduate.

Grading Rationale:
Course evaluation will be based on performance on quizzes, tests, projects, lab assignments,
papers, presentations, and weekly performance. Tests and quizzes will be in short answer, true or false, matching or multiple choice form, and will cover material from lectures, reading assignments, textbooks, labs, and projects. Unexcused absences from tests will result in a score of zero for the test. Instructors must be notified in advance if a student will not be present when a test is given.

Pop Quizzes: There may be one or more pop quizzes per week. There is no make-up for missed pop quizzes.

Lab Assignments: Several labs will be given each week which need to be finished by the specified due date. Late lab procedures will be penalized at a rate of 20% per day. There is no make-up for missed projects. Any disk submitted for grading that contains a virus will receive a zero for the project. Any damaged disk submitted for grading will also receive a zero for that project. Lab projects will be graded on accuracy, professionalism, style, and completeness.

Course Projects: Course projects must be completed on or before the due date and time. Late course projects will be penalized at a rate of 20% per day. There is no make-up for missed course projects. Any disk submitted for grading that contains a virus will receive a zero for that project. Lab projects will be graded on accuracy, professionalism, style, and completeness.

Final Projects: Each course will contain a final project. Details for the final project will be provided well in advance of the due date. Any disk submitted for grading that contains a virus will receive a zero for the project. Any damaged disk submitted for grading will also receive a zero for that project. Lab projects will be graded on accuracy, professionalism, style, and completeness.

**Attendance**

Attendance is a key part of success in the program and attendance hours cannot be made up. However, there are times when a student will have to be absent. It is their responsibility to notify the instructor of any absences. The hours that you were not in class cannot be replaced. You will miss valuable information shared either by your instructor or with other students. Many times you will miss "one-shot" opportunities for lessons, labs, or quizzes which cannot be made-up. Students are responsible for obtaining the work that can be made-up. As outlined in the student handbook several types of absences are "no-charge". The Director of Student Services will determine whether absences should be treated as such. No-charge absences do not count against your attendance record.

**Dress Code:**

All students will be expected to wear properly fitting apparel suitable to this area of work, often known as "business casual". All dress code policies of Washburn Tech will be followed with the following enhancements for this program: (1) All students will wear slacks while in class. Blue jeans are not appropriate for this program. (2) All shirts must have a collar and will be buttoned and tucked in. (3) Sandals and open shoes are not appropriate.
Disability
The Special Support Services (SSS) Office is responsible for assisting in arranging accommodations and for identifying resources at Washburn Institute of Technology for persons with disabilities. Qualified students with disabilities MUST register and provide documentation with the office to be eligible for services. New requests for accommodations should be submitted two months or more prior to the date services should begin; however, contact the SSS Office as soon as a need may arise. Depending on the accommodation request, four to eight week lead time may be needed for timely and effective provision of services. SSS coordinates and assist in arranging services it deems appropriate of eligible students on a case-by-case basis.

If you are a student with a disability that may substantially limit your ability to participate in this class and believe you will need accommodations, it is your responsibility to contact:

Special Support Services Coordinator
Phone: 785-228-6356
E-Mail: ssscoordinator@washburn.edu