Course Title: IST/CSC109 UNIX/Linux Operating System 3 credits

Course Leader: Trudy Gift

Expected Learning Outcomes for Course

- Choose appropriate UNIX/Linux operating system commands to make effective use of the environment to solve problems
- Write efficient, effective scripts with documentation
- Research and present information and resources utilizing new commands

Assessment
(How do students demonstrate achievement of these outcomes?)
The format for the Spring 2014 did not change. There were three take-home, application exams comprised of 50 questions that the students complete. The exams demonstrate their knowledge of Unix/Linux commands and critical thinking skills. Two sections were taught and students in both had a hard time remembering to complete the exam. They were given an opportunity to decide when they wanted the exam (choose over a weekend) and still could not remember to complete it. Late submissions received a letter grade reduction for each day it was late.

Throughout the course, students create a script file (utilizing commands learned during the semester and one command found on the Internet that was not presented in class) to achieve a desired goal of their own design. The script file is graded on a rubric developed by the instructor and a professional working in the field. The script files were reviewed by the instructors for accuracy, professionalism, application of commands, and creativity based on a rubric. The student presents their script to the class explaining how the script works, demonstrating it, and then reviewing the coding of the script. The presentation is also graded on a rubric.

Students also research a Linux command/topic and a vi command not presented in class and present their findings to the class. They must include a hands-on activity, handouts, and PowerPoint presentation. This is graded on a rubric. Questions from these student presentations are also found on the exam.

Three chapter exams are developed by the lead instructor and reviewed by two professionals using Linux/UNIX.

Validation
(What methods are used to validate your assessment?)
Using CompTIA Linux Certification Objectives, course content was built around this national certification. The Linux Certification is not used as a capstone project because a minimum of 2 years work experience is required to pass the exam. A UNIX/Linux System Administrator was also consulted in the design of the course. His suggestions were incorporated into the course.

Results
(What does the data show?)
Two sections were taught with the results being very similar. In one section there for four scores that were not calculated into the final average (two walked away in the middle of the semester

and two never attended nor withdrew). The average was 81%. The other section average was an 82% with one walk-away.

Follow-up
(How have you used the data to improve student learning?)
The two instructors met to discuss the problem with the take home exams. This shows a lack of responsibility on the part of the student. It was decided to continue to use take home exams so more class time can be devoted to working/teaching students. At some points, students need to be held accountable.

Since the size of the classes are continuing to increase and the amount of hand graded assignments in this course is not (3 exams, 3 activity sheets, multiple class assignments, 3 presentations, and the final script), it was decided that we would use a software product called Netlabs to include simulations in the classroom.

Netlabs will allow us to use 2 different shells, introduce installing the linux software on machines without actually needing the equipment and aligns with the LMI requirements. The course will be tested in the summer 2014 course.

Budget Justification
(What resources are necessary to improve student learning?)
Currently no budget request items are needed.