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 the Internet for information and resources utilizing new commands

Assessment
(How do students demonstrate achievement of these outcomes?)
There are currently 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. Since there are two instructors for this course, the exams are similar (different files, same command) are used. The one instructor is a Unix System Administrator for the US Coast Guard and his input is used heavily in the creation of the exams.

Throughout the course, students create a script file (utilizing commands learned during the semester and ones found on the Internet that were 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 are then reviewed by the instructor and the professional for accuracy, professionalism, application of commands, and creativity.

Students also research a Linux command/topic not presented in class and prepare a presentation for the class including hands-on activity(ies), handouts, and PowerPoint presentation. This is graded on a rubric.

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?)
Currently the students are successful in completing the exams with an 85.7% pass rate.

There is a suggestion to take the first six chapters of this course and incorporate them into an Operating Systems course (that would include Windows 7 and Mac, also). The Operating Systems course would transfer better than the current Windows Operating Systems course. If this were to occur, that would allow for the addition of a section on Perl or System Administration commands. The System Administration module would be possible since we are (as of Fall 2010) on a stand-alone server. Currently, there is not enough time in the semester to incorporate this.

Follow-up

(How have you used the data to improve student learning?)

Current instruction has been changed to incorporate more Internet research, more critical thinking applications for solution to classroom questions (the instructor is not as quick to answer questions) and peer teaching. Content is currently remaining the same until the decision about updating the Operating Systems course has been reached.

Budget Justification

(What resources are necessary to improve student learning?)

Currently no budget request items are needed.