

Pellissippi State Community College
Master Syllabus

UNIX UTILITIES AND SHELL PROGRAMMING
CST 2460

Class Hours: 3.0
Laboratory Hours: 3.0
Credit Hours: 4.0
Revised: June 2009

Instructor:
Office:
Phone:
Email:

Catalog Course Description:

A study of the UNIX operating system. Topics include use of UNIX utilities, electronic mail, shell programming.

Entry Level Standards:

The entering student should have a familiarity with the MS-DOS operating system. The student is expected to have moderate programming abilities in a high-level language.

Pre-requisites and/or Co-requisites: CST 1110 and one programming course or CSIT 1720.

Textbooks and Other Related Material Basic to the Course:

Das; Your UNIX: The Ultimate Guide; 2nd Edition, McGraw-Hill, 2006.

Robbins & Beebe; Classic Shell Scripting; O'Reilly; 2005.

I. WEEK/CHAPTER/TOPIC BASIS:

Week	Lecture Topic
1	Getting started
2	Understanding the UNIX command
3	General purpose utilities
4	The vi/vim editor, The file system
5	The file system, File attributes
6	The shell
7	Simple filters
8	The process, TCP/IP networking
9	Email, The Internet
10	Shell programming
11	Shell programming
12	Advanced shell programming
13	Using Awk
14	Perl
15	Final exam

II. COURSE OBJECTIVES:

- A. Use basic UNIX commands and utilities. II, III, IV, VI, VIII, IX, X, XII
- B. Use redirection and piping. II, III, IV, VI, VIII, IX, X, XII
- C. Produce and use simple user interfaces. I, III, IV, V, IX, XI, XII
- D. Use common UNIX text editors. III, IV, VI, VIII, IX, XI
- E. Write shell programs. III, IV, V, VI, IX, XI

III. INSTRUCTIONAL PROCESSES: Students will:

- 1. Use professional tools to produce software components and documentation. *Technological Literacy, Transitional Strategy, Active Learning*
- 2. Create a well-documented shell application based on client input and specifications. *Communications Outcome, Technological Literacy, Transitional Strategy, Active Learning*
- 3. Create a CGI scripts based on client input and specifications. *Communications Outcome, Technological Literacy, Transitional Strategy, Active Learning*
- 4. Use professionally accepted methods and materials in their approach to completion of applications. *Technological Literacy, Transitional Strategy, Active Learning*

IV. EXPECTATIONS FOR STUDENT PERFORMANCE: The student should be able to

- 1. Write shell scripts in C shell and/or Bourne shell. A, B, C, D
- 2. Use UNIX commands to solve problems. A, B, C
- 3. Customize a UNIX environment for a specific application. A, B, C, D
- 4. Produce formatted documents using UNIX text processing tools. A, D
- 5. Apply the 'tool box' concept to specific problems. A, B, C
- 6. Be able to perform file management activities to their file system. A, B
- 7. Use vi and/or emacs and/or pico editor to create and edit files. A, D
- 8. Be familiar with the development of the UNIX system. A, B

V. EVALUATION:

A. Testing Procedures:

At least 2 tests will be given. Tests may only be made up for excused absences. An excused absence is one that can be verified by supporting documentation. Failure to make a passing quiz average will result in a grade of F for the course.

B. Laboratory Expectations:

At least 5 lab projects will be assigned during the course of the semester. Failure to make a passing lab project average will result in a grade of F for the course.

C. Field Work: N/A

D. Other Evaluation Methods: N/A

E. Grading Scale:

93 – 100	A
88 – 92	B+
83 – 87	B
78 – 82	C+
73 – 77	C
65 – 72	D
0 – 64	F

VI. POLICIES:

A. Attendance Policy:

Pellissippi State Community College expects students to attend all scheduled instructional activities. As a minimum, students in all courses must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course. (*Pellissippi State Online Catalog*)

B. Academic Dishonesty:

Plagiarism, cheating and other forms of academic dishonesty are prohibited. A student guilty of academic misconduct, either directly or indirectly through participation or assistance, is immediately responsible to the instructor of the class. In addition to other possible disciplinary sanctions that may be imposed through the regular Pellissippi State procedures as a result of academic misconduct, the instructor has the authority to assign an F or a zero for the exercise or examination or to assign an F in the course. (*Pellissippi State Online Catalog*)

C. Computer Usage Guidelines:

College-owned or –operated computing resources are provided for use by students of Pellissippi State. All students are responsible for the usage of Pellissippi State's computing resources in an effective, efficient, ethical and lawful manner. (*Pellissippi State Online Catalog*)

D. Accommodation for Disabilities:

Students who need accommodations because of a disability, have emergency medical information to share, or need special arrangements in case the building must be evacuated should inform the instructor immediately, privately after class or in her or his office. Students must present a current accommodation plan from a staff member in Services for Students with Disabilities (SSWD) in order to receive accommodations in this course. Services for Students with Disabilities may be contacted by going to Goins134 or 126 or by phone: 694-6751(Voice/TTY) or 539-7153. More information is available at www.pstcc.edu/departments/swd/

E. Other: In the event that you have an emergency beyond your control, you must notify the instructor as soon as possible.