PELLISSIPPI STATE COMMUNITY COLLEGE
MASTER SYLLABUS

LINUX SYSTEM ADMINISTRATION
CSIT 2780

Class Hours: 3.0 Credit Hours: 4.0
Laboratory Hours: 3.0 Revised: Fall 2015

Catalog Course Description:

This course covers installation and administration of the Linux operating system.

Entry Level Standards:

The student must have college level reading and math skills and keyboarding skills of at least 28 wpm. Student must have familiarity with the operation of standard PCs.

Prerequisites:

CSIT 1720

Textbook(s) and Other Course Materials:

Required Text:

Required Hardware:
1) One USB Flash drive (At least 32 GB)
2) At least six CDs and six DVDs may be required for system installation

I. Week/Unit/Topic Basis:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction, course overview, and basic commands</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Linux installation and printer configuration</td>
<td>5, 6</td>
</tr>
<tr>
<td>3</td>
<td>File system hierarchy and editors</td>
<td>1, 5</td>
</tr>
<tr>
<td>4</td>
<td>Filters, pipes, processes, and runlevels</td>
<td>1, 5</td>
</tr>
<tr>
<td>5</td>
<td>Storage devices; <strong>Test 1</strong></td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>Handling permissions and ownerships</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>Manage system software</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>Introduction to bash</td>
<td>9</td>
</tr>
<tr>
<td>9</td>
<td>User and group administration</td>
<td>7</td>
</tr>
<tr>
<td>10</td>
<td><strong>Review and Test 2</strong></td>
<td>-</td>
</tr>
</tbody>
</table>
II. Course Goals*:

The course will:

A. Guide students to understand Linux file system hierarchy, commands, and utilities. (I, II, III, IV)
B. Foster student’s ability to install and update Linux operating system. (I, II, III, IV)
C. Expand student’s knowledge on Linux desktop environments and applications. (II, III, IV)
D. Guide students to perform Linux system administration activities. (I, II, III, IV, VI)

*Roman numerals after course objectives reference goals of the CSIT program.

III. Expected Student Learning Outcomes*:

Students will be able to:

1. Install Linux operating system and configure printer. (B, D)
2. Identify production phase and testing phase kernels. (A, C)
3. Describe and use basic Linux commands and utilities. (A, D)
4. Write simple bash scripts. (A, C)
5. Use storage devices, editors, and desktop environments. (A, C, D)
6. Use relative and absolute paths to navigate directories and to manage files. (A, D)
7. Identify and control processes and system run levels. (A, C, D)
8. Create and manage user and group accounts. (A, B, C, D)
9. Locate and edit system configuration files. (C, D)
10. Manage software and perform system upgrade using rpm and yum utilities. (A, B, C, D)
11. Take system backup using host-based and network-based backup utilities. (C, D)
12. Apply regular and special permissions to files and directories. (A, C, D)
13. Configure local storage using logical volumes and disk partitions. (A, B, C, D)

* Capital letters after Expected Student Learning Outcomes reference the course goals listed above.
IV. Evaluation:

A. Testing Procedures: 45% of grade

At least three tests are recommended. There will be no make-up tests unless prior arrangements have been made with the instructor. Failure to make a passing test average may result in a grade of F for the course.

B. Laboratory Expectations: 55% of grade

At least 6 lab assignments will be given during the semester. In addition, students may be assigned a team project. A late penalty will be imposed on any overdue assignment. Failure to make a passing average in lab assignments and team project may result in a grade of F for the course.

C. Field Work:

N/A

D. Other Evaluation Methods:

N/A

E. Grading Scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>93 – 100</td>
<td>A</td>
</tr>
<tr>
<td>88 – 92</td>
<td>B+</td>
</tr>
<tr>
<td>83 – 87</td>
<td>B</td>
</tr>
<tr>
<td>78 – 82</td>
<td>C+</td>
</tr>
<tr>
<td>73 – 77</td>
<td>C</td>
</tr>
<tr>
<td>65 – 72</td>
<td>D</td>
</tr>
<tr>
<td>Below 65</td>
<td>F</td>
</tr>
</tbody>
</table>

V. Policies:

A. Attendance Policy:

Pellissippi State expects students to attend all scheduled instructional activities. As a minimum, students in all courses (excluding distance learning courses) must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course. Individual departments/programs/disciplines, with the approval of the vice president of Academic Affairs, may have requirements that are more stringent. In very specific circumstances, an appeal of the policy may be addressed to the head of the department in which the course was taken. If further action is warranted, the appeal may be addressed to the vice president of Academic Affairs.

B. Academic Dishonesty:

Academic misconduct committed either directly or indirectly by an individual or group is subject to disciplinary action. Prohibited activities include but are not limited to the following practices:

- Cheating, including but not limited to unauthorized assistance from material, people, or devices when taking a test, quiz, or examination; writing papers or reports; solving problems; or completing academic assignments.
• Plagiarism, including but not limited to paraphrasing, summarizing, or directly quoting published or unpublished work of another person, including online or computerized services, without proper documentation of the original source.
• Purchasing or otherwise obtaining prewritten essays, research papers, or materials prepared by another person or agency that sells term papers or other academic materials to be presented as one’s own work.
• Taking an exam for another student.
• Providing others with information and/or answers regarding exams, quizzes, homework or other classroom assignments unless explicitly authorized by the instructor.
• Any of the above occurring within the Web or distance learning environment.

Please see the Pellissippi State Policies and Procedures Manual, Policy 04:02:00 Academic/Classroom Conduct and Disciplinary Sanctions for the complete policy.

C. Accommodations for disabilities:

Students that 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 Disability Services (DS) in order to receive accommodations in this course. Disability Services may be contacted by sending email to disabilityservices@pstcc.edu, or by visiting Alexander 130. More information is available at http://www.pstcc.edu/sswd/.

D. Other Policies:

Computer Usage Guidelines:
College-owned or -operated computing resources are provided for use students of Pellissippi State Community College. All students are responsible for the use of Pellissippi State's computing resources in an effective, efficient, ethical and lawful manner.