INTRODUCTION TO SCRIPTING LANGUAGES
CSIT 2280

Class Hours: 2.0  Credit Hours: 3.0
Laboratory Hours: 2.0  Revised: Spring 2015

Catalog Course Description:
An introduction to script programming as a tool for system administration, automation, and customization and as a platform for Web-based applications. Compares shell command languages and scripting languages used on Unix and Linux systems.

Entry Level Standards:
The entering student should have a familiarity with the Unix/Linux operating system. The student is expected to have moderate programming abilities in a high-level language (HLL.)

Pre-requisite(s): CSIT 1510

Textbooks and Other Related Material Basic to the Course:


I. Week/Chapter/Topic Basis:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Getting started</td>
</tr>
<tr>
<td>2</td>
<td>Overview of shells, General purpose utilities</td>
</tr>
<tr>
<td>3</td>
<td>Integrating tools using piping and redirection</td>
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<tr>
<td>4-7</td>
<td>Shell programming</td>
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<tr>
<td>8-9</td>
<td>HLL script programming</td>
</tr>
<tr>
<td>10-15</td>
<td>HLL script programming using more advanced HLL features</td>
</tr>
</tbody>
</table>

II. Course Goals:
The course will:

A. Build the skills to use basic Unix/Linux commands and utilities. I, II, III, IV, V
B. Build the skills to use redirection and piping. I, II, III, IV, V
C. Build the skills to use various shells available in Unix/Linux. I, II, III, IV, V
D. Enhance the student’s knowledge of using high-level programming languages for scripting. II, III, IV, V
E. Foster the ability to write shell programs using an OS shell language. II, III, IV, V
F. Foster the ability to write scripts in a high-level programming language. II, III, IV, V
III. **Expected Student Learning Outcomes:**
Students will be able to:

1. Write shell scripts in variations of the Bourne shell and/or C shell. A, B, C
2. Use Unix/Linux commands to solve problems. A, B, C
3. Customize a Unix/Linux environment for a specific application. A, B, C
4. Produce formatted output using OS tools and scripts. A, B, E, F
5. Apply the 'tool box' concept to specific problems. A, B, C, E
6. Use OS utilities for text formatting. A, B, C
7. Use one or more high-level programming languages. A, D, F
8. Integrate OS tools and high-level programming code. A, B, C, D, E, F

IV. **Evaluation:**

A. Testing Procedures: 50% of grade
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: 40% of grade
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: 10% of grade
Unannounced quizzes and homework will also comprise part of the final grade for the course.

E. Grading Scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>93 – 100</td>
</tr>
<tr>
<td>B+</td>
<td>88 – 92</td>
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<tr>
<td>B</td>
<td>83 – 87</td>
</tr>
<tr>
<td>C+</td>
<td>78 – 82</td>
</tr>
<tr>
<td>C</td>
<td>73 – 77</td>
</tr>
<tr>
<td>D</td>
<td>65 – 72</td>
</tr>
<tr>
<td>F</td>
<td>0 – 64</td>
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</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.

C. 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. It is each individual user's responsibility to abide by the policy available at www.pstcc.edu/ppm/pdf/08-13-05.pdf.

D. Accommodation 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/.