ADVANCED JAVA PROGRAMMING
CSIT 2270

Class Hours: 2.0  Instructor:
Laboratory Hours: 2.0  Office:
Credit Hours: 3.0  Phone:
Revised: June 4, 2014  Email:

Catalog Course Description:
A study of Java programming language to design advanced graphical user interfaces and web-enabled applications. Topics include JavaBeans; internationalization; Java GUI design; advanced Java database programming; Java servlets; and JavaServer Pages. The emphasis will be on design and development of usable software products and documents through team projects.

Entry Level Standards:
The entering student should have a familiarity with the Windows operating system and an integrated program development environment such as NetBeans. Basic knowledge of Java programming fundamentals and graphical user interface design concepts is expected.

Prerequisites:  CSIT 1520, CSIT1810

Textbook(s) and Other Course Materials:

I. Week/Unit/Topic Basis:

<table>
<thead>
<tr>
<th>Week</th>
<th>Chapter</th>
<th>Topic(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(1, 2, 3)</td>
<td>Introduction and course overview</td>
</tr>
<tr>
<td>2</td>
<td>35</td>
<td>Internationalization</td>
</tr>
<tr>
<td>3</td>
<td>36, (9)</td>
<td>Java Beans and Bean Events</td>
</tr>
<tr>
<td>4</td>
<td>37</td>
<td>Containers; Layout Managers, and Borders</td>
</tr>
<tr>
<td>5</td>
<td>38</td>
<td>Menus, Toolbars, Dialogs, and Internal Frames</td>
</tr>
<tr>
<td>6</td>
<td>39, (7)</td>
<td>MVC and Swing Models</td>
</tr>
<tr>
<td>7</td>
<td>40</td>
<td>JTable and JTree</td>
</tr>
<tr>
<td>8</td>
<td>34, 41</td>
<td>Advanced Java Database Programming</td>
</tr>
<tr>
<td>9</td>
<td>41, (14)</td>
<td>Advanced Java Database Programming</td>
</tr>
<tr>
<td>10</td>
<td>42, (6)</td>
<td>Java Servlets</td>
</tr>
<tr>
<td>11</td>
<td>(7, 8)</td>
<td>Java Servlets</td>
</tr>
<tr>
<td>12</td>
<td>43, (5)</td>
<td>Java Server Pages (JSP)</td>
</tr>
<tr>
<td>13</td>
<td>(7, 8, 9)</td>
<td>Java Server Pages (JSP)</td>
</tr>
<tr>
<td>14</td>
<td>-</td>
<td>Project Review and Presentations</td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>Final Exam Period</td>
</tr>
</tbody>
</table>

In the chapter column, number(s) in the parenthesis represents chapter(s) from the Murach’s book.
II. **Course Goals**:  

The course will

A. Expand student understanding of advanced GUI programming concepts of the Java language. (III, IV, V)  
B. Guide students to understand and use server-side programming concepts and tools. (IV, V)  
C. Enhance effective use of object-oriented programming concepts and software development principles. (III, IV)  
D. Foster student ability to work individually and in project teams. (I, II)  
E. Expand student understanding to write Java programs and create documents to meet end-user needs. (I, II, III, IV, V)  

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

III. **Expected Student Learning Outcomes**:  

Students will be able to:

1. Explain enterprise Java platform architecture and its components. (A, B)  
2. Write Java programs that meet internationalization requirements. (C, E)  
3. Use Java Beans and Bean events. (A, B, C, E)  
4. Explain Swing models and identify advanced GUI components such as internal frames, toolbars, menus and layout managers. (A, C)  
5. Write Java programs using JTable and JTree Swing components to display data in grid and hierarchical formats. (A, C)  
6. Explain database connectivity methods and write Java programs to interface with major databases. (B, C, E)  
7. Write modular programs and Java applications using Java Servlets and Java Server Pages (JSP). (A, B, C, D, E)  
8. Generate project documents such as requirement specifications document, design document and test document. (C, D, E)  
9. Use NetBeans IDE to configure web servers, databases and other server-side computing resources. (B, E)  

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

IV. **Evaluation**:  

A. Testing Procedures: 30% of grade  
   At least two tests are recommended for the course. There will be no make-up tests unless prior arrangements have been made with the instructor. Failure to make a passing test average will result in a grade of F for the course.  

B. Laboratory Expectations: 70% of grade  
   At least 4 lab assignments will be given during the semester. In addition, a team project will be assigned. A late penalty will be imposed on any overdue assignment. Failure to make a passing average in lab assignments and team project will result in a grade of F for the course.  

C. Field Work: None  

D. Other Evaluation Methods: None
E. Grading Scale:

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Grade</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. **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](http://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/.

E. Extended College Closure:
Pellissippi State Community College is committed to the educational process and student learning. In the event of a prolonged college closure (of at least a week), the educational process will continue through the use of the college’s on-line learning environment (Desire2Learn). The instructor will post instructions, specific assignments, due dates, etc. in Desire2Learn (D2L). It is the student’s responsibility to login to D2L and check posted instructions and assignments.