NOTE: This course is not designed for transfer credit.

Catalog Course Description:

A study of the Java programming language covering design of advanced graphical user interfaces and web-enabled applications. The emphasis will be on design and development of usable software products and documents using semester long team projects.

Entry Level Standards:

The entering student should have a familiarity with 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 or department approval

Textbook(s) and Other Course Materials:


I. Week/Unit/Topic Basis:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction and Project Overview</td>
</tr>
<tr>
<td>2</td>
<td>Internationalization</td>
</tr>
<tr>
<td>3</td>
<td>Java Beans and Bean Events</td>
</tr>
<tr>
<td>4</td>
<td>Containers; Layout Managers and Borders</td>
</tr>
<tr>
<td>5</td>
<td>Menus, Toolbars, Dialogs, and Internal Frames</td>
</tr>
<tr>
<td>6</td>
<td>MVC and Swing Models</td>
</tr>
<tr>
<td>7</td>
<td>JTable and JTree</td>
</tr>
<tr>
<td>8</td>
<td>Accessing Databases with JDBC</td>
</tr>
<tr>
<td>9</td>
<td>Advanced Java Database Programming</td>
</tr>
<tr>
<td>10</td>
<td>Java Servlets</td>
</tr>
<tr>
<td>11</td>
<td>Java Servlets</td>
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</tbody>
</table>
II. Course Objectives*:

A. Use advanced GUI programming concepts of the Java language. I II IV VI VII VIII IX XI XII

B. Use web programming concepts and tools I III V VI VII IX X XI

C. Use search tools, inquiries, Email and other available resources found on the Internet to locate, use, download, upload, and communicate effectively. II III IV

D. Write software that meets specification requirements and pass tests based on these requirements. II III IV VII

E. Demonstrate individual and teamwork standards compliance to accomplish given tasks within timeframes established. I

F. Develop an environment that serves customer and/or market needs. V VII IX X XII

G. Write Java programs to solve a wide variety of problems. II III IV VI VIII IX XI XII

H. Implement object-oriented software design techniques. II III VI VII IX XI XII

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

III. Instructional Processes*:

Students will:

1. Produce advanced graphical user interfaces and web-enabled Java applications. *Mathematics Outcome, Technological Literacy Outcome, Active Learning Strategies*

2. Produce a fully working end-product as part of a collaborative effort for sharing with other class members. *Communication Outcome, Transitional Strategies, Active Learning Strategies*

3. Use the Internet as a medium for obtaining documentation and instruction. *Communication Outcome, Technological Literacy Outcome, Transitional Strategies*

4. Develop and design software product meeting given specifications. *Communication Outcome, Technological Literacy Outcome, Mathematics Outcome, Transitional Strategies, Active Learning Strategies*

5. Use professional tools to produce software components and documentation. *Technological Literacy Outcome, Transitional Strategies, Active Learning Strategies*

6. Practice elements of the work ethic such as punctuality, professionalism, dependability,
cooperation, and contribution. *Communication Outcome, Active Learning Strategies*

7. Participate in a peer review of term projects. *Communication Outcome, Transitional Strategies, Active Learning Strategies*

8. Use professionally accepted methods and materials in completion of program development. *Technological Literacy Outcome, Transitional Strategies, Active Learning Strategies*

*Strategies and outcomes listed after instructional processes reference Pellissippi State’s goals for strengthening general education knowledge and skills, connecting coursework to experiences beyond the classroom, and encouraging students to take active and responsible roles in the educational process.*

**IV. Expectations for Student Performance**: 

Upon successful completion of this course, the student should be able to:

1. Use advanced Swing and AWT components for GUI design. A, G

2. Use Java servlets and Java Server Pages. A, B, C

3. Use Java development and database access tools prevalent in the industry. A, B, C

4. Use JavaBeans and GUI components to perform specific tasks. C, E, F

5. Find resources and information to perform specific tasks. C, D, E

6. Use web pages and search tools effectively. D, E, F

7. Use communication tools effectively. D, E, F

8. Show effective operational use of available utilities, products, software and hardware. C, D, E

9. Produce applications, documentation, sources of information, and tests in a timely, well-organized manner. C, D, E

*Letters after performance expectations reference the course objectives listed above.*

**V. Evaluation:**

A. Testing Procedures:

At least 4 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 3 project assignments will be given during the course of the semester. At least 1 project or project part will be a team project which includes at least one presentation. Failure to make a passing project average will result in a grade of F for the course.

C. Field Work:
D. Other Evaluation Methods:

N/A

E. Grading Scale:

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Grade</th>
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<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>

VI. Policies:

A. Attendance Policy:

Pellissippi State Technical 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 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.

C. Accommodations for disabilities:

If you need accommodations because of a disability, if you have emergency medical information to share, or if you need special arrangements in case the building must be evacuated, please inform the instructor immediately. Please see the instructor privately after class or in his/her 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 Goins 127 or 131 or by phone: 694-6751(Voice/TTY) or 539-7153.

D. Other:

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