Java Programming
CSIT 2650 (formerly CST 2650)

Class Hours: 3.0 Credit Hours: 4.0
Laboratory Hours: 3.0 Revised: Spring 03

NOTE: This course is not designed for transfer credit.

Catalog Course Description:
A study of the Java programming language in applications including business and communications. The emphasis will be on applet development for the World Wide Web (WWW), but stand-alone applications will also be discussed. Concepts of event-driven and object-oriented programming will be an integral part of the course.

Entry Level Standards:
The entering student should have a familiarity with the DOS and Windows operating systems and should be competent in at least one high-level programming language. The student must have a student general user account and knowledge of its use. An elementary knowledge of Unix would be very helpful.

Prerequisites:
CSIT 1560 or department approval

Textbook(s) and Other Reference Materials Basic to the Course:

Recommended References:
java.sun.com
www.jars.com

I. Week/Unit/Topic Basis:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Introduction, Java Applications, HTML &amp; UNIX</td>
</tr>
<tr>
<td>2</td>
<td>Java Applets, Control Structures</td>
</tr>
<tr>
<td>3</td>
<td>Control Structures</td>
</tr>
<tr>
<td>4</td>
<td>Methods</td>
</tr>
<tr>
<td>5</td>
<td>Arrays</td>
</tr>
<tr>
<td>6</td>
<td>Object-based Programming</td>
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<tr>
<td>7</td>
<td>Object-oriented Programming (OOP)</td>
</tr>
</tbody>
</table>
II. Course Objectives*

A. Use the syntax of the Java language. II III IV VI VII VIII IX XI XII
B. Use structured programming concepts developed in earlier courses. I III V VI IX X XI
C. Use search tools, Email, FTP, TELNET and other available resources found on the Internet to locate, use, download, upload and communicate effectively. II III IV
D. Write programs that meet written requirements. II III IV VII
E. Demonstrate individual and/or teamwork standards 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 Java programs as applets, standalone applications or applet/application combinations. *Problem Solving and Decision Making Outcome, Technological Literacy Outcome, Information Literacy Outcome, Active Learning Strategy*
2. Produce a fully working end-product as part of a collaborative effort for sharing with other class members. *Communication Outcome, Transitional Strategy, Active Learning Strategy*
3. Use the Internet as a medium for obtaining documentation and instruction and for submitting assignments. *Communication Outcome, Technological Literacy Outcome, Information Literacy Outcome, Transitional Strategy*
4. Develop an individual client-based software product meeting written requirements. *Communication Outcome, Technological Literacy Outcome, Information*
Literacy Outcome, Problem Solving and Decision Making Outcome, Transitional Strategy, Active Learning Strategy

5. Use professional tools to produce software components and documentation. Technological Literacy Outcome, Transitional Strategy, Personal Development Outcome

6. Practice elements of the work ethic such as punctuality, professionalism, dependability, cooperation, and contribution. Personal Development Outcome

7. Use professionally accepted methods and materials in completion of program development. Technological Literacy Outcome, Transitional Strategy, Active Learning Strategy, Personal Development Outcome

*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. Recognize Java data types and operators. A, G
2. Use Java program control structures. A, B, C
3. Write Java methods. A, B, C
4. Use Java arrays. A, B, C
5. Write Java classes (concrete, abstract, super and subclasses) and interfaces. A, B, C
6. Use Java Strings and string manipulating classes. A, B, C
7. Use Java GUI components. A, B, C
8. Handle Java exceptions. A, B, C
9. Write to/read from files in Java. A, B, C
10. Use Java development tools prevalent in the industry. A, B, C
11. Use graphic user interfaces to perform specific tasks. C, E, F
12. Find resources and information to perform specific tasks. C, D, E
13. Use web pages and search tools effectively. D, E, F
14. Use communication tools effectively. D, E, F
15. Show effective operational use of available utilities, products, software and hardware. C, D, E
16. 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 test average will result in a grade of F for the course.

B. Laboratory Expectations:

At least 3 projects will be assigned during the course of the semester. Failure to make a passing project average will result in a grade of F for the course.

C. 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>

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.

B. Other:

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