Catalog Course Description:

The study of event-driven programming and rapid application development through the use and practical application of Delphi language. The course covers the conventions and methods of Visual programming and the development of a graphical user interface through the conventional Pascal language and Object Pascal programming.

Entry Level Standards:

The entering student should have a familiarity with Windows operating systems and should be competent in at least one high-level programming language.

Prerequisite:

CST 1540 or department approval

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

*SAMS Teach Yourself Borland Delphi 4 in 21 Days*, by Kent Reisdorph, SAMS Borland Press.

I. Week/Unit/Topic Basis:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Getting Started with Delphi</td>
</tr>
<tr>
<td>2</td>
<td>Understanding Pascal, Part I</td>
</tr>
<tr>
<td>3</td>
<td>Understanding Pascal, Part II</td>
</tr>
<tr>
<td>4</td>
<td>Classes and Object-Oriented Programming</td>
</tr>
<tr>
<td>5</td>
<td>The Delphi Integrated Development Environment (IDE)</td>
</tr>
<tr>
<td>6</td>
<td>The Visual Component Model</td>
</tr>
<tr>
<td>7</td>
<td>Form Designer and the Menu Designer</td>
</tr>
<tr>
<td>8</td>
<td>VCL Components</td>
</tr>
<tr>
<td>9</td>
<td>Creating Applications in Delphi</td>
</tr>
</tbody>
</table>
II. Course Objectives*:

A. Demonstrate proficiency and knowledge of the use of the editor and the Delphi language. II, VI, III

B. Gain an understanding of object-oriented programming. I, VI, VII, VIII

C. Learn about visual forms, components, and their properties. I, IV, VI, VII

D. Create menus, tool bars, and dialogs such as Open, File, and Print. II, III, VI

E. Demonstrate problem-solving skills using the Delphi language. I, IV, VIII, IX

F. Show a working knowledge of the Delphi language set, techniques and coding associated with writing efficient programs. I, II, III, VI, VIII, IX

G. Analyze problems, design, and code Delphi statements to form working graphic-based programs. I, III, VI, VII, IX

H. Apply Delphi skills to real world applications and develop window images and controls. IV, V, VII, VIII

*Roman numerals after course objectives reference goals of the Business and Computer Technologies department.

III. Instructional Processes*:

Students will:

1. Use Delphi Visual Environment to create a well-documented applications based on end-user request. Communication Outcome, Problem Solving and Decision Making Outcome, Technological Literacy Outcome, Information Literacy Outcome, Transitional Strategy

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

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

4. Use professionally accepted methods and materials in completion of applications. Technological Literacy Outcome, Transitional Strategy, Active Learning Strategy, Personal Development Outcome
5. Use the Internet as a medium for obtaining documentation and instruction. *Communication Outcome, Technological Literacy Outcome, Information Literacy Outcome, Active Learning Strategy, Transitional Strategy*

*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. Understand the fundamental concepts of event-driven, visual and structured programming concepts. B,C,E,F

2. Use the integrated development environment to access the editor and debugger to create and test programs. A,C,D,F

3. Apply the more commonly used standard, system, and dialog components to develop applications. C,D,F,G

4. Write simple program statements to implement event handlers. E,F,G,H

5. Develop database applications. C,H

6. Demonstrate a working knowledge of the Delphi program language terms, statements, properties, methods, events, controls, forms and functions. A,B,C,D,E,F

7. Develop windows which are visually correct and which function according to specifications. B,C,F,G,H

8. Create fully functioning window driven, client-based, problem-solving programs complete with documentation per instructor's specifications. D,E,F,G,H


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

**V. Evaluation:**

**A. Testing Procedures:**

There will be three tests which count 100 points each. Tests will cover material presented in class. The tests will be cumulative in as much as the material builds upon itself. Tests are not to be missed without a valid excuse. In the unlikely event that an emergency does occur, it is the student's responsibility to contact the instructor before test time. There will be no make-up tests unless prior arrangements are made with the instructor.

**B. Laboratory Expectations:**

Assignments will be given and must be completed and submitted on or before the due date. Two points per day will be deducted on late labs. The lab assignments will total 200 to 250 points.

**C. Field Work:**

None
D. Other Evaluation Methods:

Quizzes and homework assignments will be given which will total 50 to 100 points.

E. Grading Scale:

Grades are determined according to the percentage of total possible points you have earned.

- 90% and Above    A
- 80% - 89.9%       B
- 70% - 79.9%       C
- 60% - 69.9%       D
- Below 60%         F

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. Attendance of each class and lab is expected. If a class is missed, students are encouraged to make up all work.

B. Academic Dishonesty:

Plagiarism, cheating, and other forms of academic dishonesty are strictly prohibited. A student caught cheating will be given a grade of "F" for the course.