PELLISSIPPI STATE TECHNICAL COMMUNITY COLLEGE
MASTER SYLLABUS

C++: AN INTRODUCTION TO PROGRAMMING
CSIT 1541

Class Hours: 3.0  Credit Hours: 4.0
Laboratory Hours: 3.0  Revised: Spring 05

NOTE: This course is not designed for transfer credit.

Catalog Course Description:

An introduction to programming using the C++ language. Extensive problem solving, algorithm development, programming logic, object-oriented construction, syntax fundamentals and program design methodologies will be used to provide a foundation of understanding computer programming.

Entry Level Standards:

College level reading and math skills; keyboarding skills of at least 20 wpm

Prerequisites:

None

Textbook(s) and Other Course Materials:


I. Week/Unit/Topic Basis:

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<td>Classes and Objects</td>
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<td>Inheritance, Virtual Functions and Polymorphism</td>
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</table>
II. Course Objectives*:

A. Become familiar with syntax, concepts and development of C++ programs using good programming design practices. IV, VI, VII, XI

B. Create simple to complex C++ programs to solve real-world-applied problems. III, V, VI, XII

C. Generate programs which function within specific specifications and expectations. II, III, VI, VIII

D. Develop industry standard graphic user interfaces (GUI) for applications using Windows or other GUI (Linux) controls. II, III, IV, V, VI, VIII, XI, XII

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

III. Instructional Processes*:

Students will:

1. Participate in individual project generation and as a project development team-member. Communication, Problem Solving and Decision Making Outcome, Personal Development Outcome, Transitional Strategy, Active Learning Strategy

2. Use professionally accepted methods and materials in completion of programs and a final project. Technological Literacy Outcome, Personal Development Outcome, Transitional Strategy, Active Learning Strategy

3. Use a variety of techniques to present a group project. Communication Outcome, Personal Development Outcome, Transitional Strategy, Active Learning Strategy

4. Demonstrate effective use of the OOP environment and produce high quality projects. Problem Solving and Decision Making Outcome, Communication Outcome, Transitional Strategy, Active Learning Strategy

5. Practice the elements of work ethic such as punctuality, professionalism, dependability, cooperation and contribution. 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. Demonstrate effective use of the development environment for C++ programs. A B C

2. Use menus and message boxes. A B D

3. Use icons, cursors and bitmaps. A B D

4. Use advanced controls, functions, selection, repetition, iterators and other language
features. A B C D

5. Understand message processing and the use of this language as a basis for developing HPC products. A B D

6. Create and implement functional routines that meet specific parameters or specifications. A B D

7. Demonstrate the use of the various OOP features, techniques, concepts and facilities. A B C D

8. Understand class hierarchy in the foundation class system. A B C D

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

V. Evaluation:

A. Testing Procedures:

       Lab Exercises     300 points
       Final Project     200 points
       Mid-term Exam     250 points
       Final Exam        250 points
       Total             1000 points

B. Laboratory Expectations:

       There will be several individual lab assignments.

C. Field Work:

       None is required.

D. Other Evaluation Methods:

       Students will work on a final project as a team. Each team will consist of two members. The team will design, code a program, and present their final findings to the class. The subject of the project must be approved by the instructor at least a month before the presentation of projects. Each team member will be assessed based on his/her participation in the project. Individual work is strongly discouraged. All team members MUST participate in coding the program.

E. Grading Scale:

       930 - 1000     A
       870 - 929       B+
       830 - 869       B
       770 - 829       C+
       700 - 769       C
       600 - 699       D
       Below 600       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. [NOTE: No differentiation is noted for excused/unexcused absences. These will be treated as an absence.] (Pellissippi State, 2004-2006 Catalog, page 83)
B. Academic Dishonesty:

Plagiarism, cheating, and other forms of academic dishonesty are prohibited. Students guilty of academic misconduct, either directly or indirectly through participation or assistance, are immediately responsible to the instructor of the class. In addition to other possible disciplinary sanctions which 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. *(Pellissippi State, 2004-2006 Catalog, pages 62-63)*

C. Accommodations for disabilities:

If you need accommodation 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. Privately after class or in the instructor's office. To request accommodations students must register with Services for Students with Disabilities: Goins 127 or 131, Phone: (865) 539-7153 or (865) 694-6751 Voice/TDD.

D. Other Policies:

**Computer Usage Guidelines:**
College-owned or -operated computing resources are provided for use by students of Pellissippi State. All students are responsible for the usage of Pellissippi State’s computing resources in an effective, efficient, ethical and lawful manner. *(Pellissippi State, 2004-2006 Catalog, pages 67-70)*

Students are expected to promptly attend all lecture and lab classes as assigned. If a class is missed, student must make up all work and get notes and/or handouts.