COURSE TITLE: C++ PROGRAMMING  
COURSE NUMBER: COP 2224

COURSE DESCRIPTION: A survey of the C++ programming language, with special attention to language features that support an object-oriented approach to programming. Topics include a review of basic control structures, input/output operations, and mathematical and logical operations; data types and basic data structures—including arrays, records, files, classes, and pointers; functions; parameters; and language extensibility using libraries. 3 semester hours credit. [A]

PREREQUISITES: COP 2000. The prerequisite may be waived by consent of department for students with previous appropriate coursework or work experience. Contact the course instructor for details.

NAME OF INSTRUCTOR: Nancy Burns

DATE OF LATEST REVISION: November 1, 2006


REQUIRED HARDWARE / SOFTWARE
A computer with the following software:
- Windows (XP strongly recommended; 98/NT/Me/2000 are acceptable)
- Internet Explorer or other web browser (IE 6.0 or higher)
- A standard version of C++. Microsoft Visual Studio.NET (2005 version preferred). Visual C++.NET is available in the lab and copies may be checked out for installation off campus. See note below. Other compilers are available; some are free and can be downloaded from the World Wide Web.
- Media for transporting files—eg., USB drive

Note: Computers with this configuration are available in on-campus labs. The Information Technology Center (upstairs in library) is available most weekdays and evenings; check the library for exact hours of operation. Students planning to complete assignments using off-campus computers must provide their own software.

Beside the software provided with the text, copies of the complete Visual Studio suite are available for checkout as part of Chipola’s participation in the Microsoft Developer Network Academic Alliance (MSDNAA). See Mr. D. Everett (Office: A 126, Phone: 718-2216). Check the Microsoft system requirements to verify hardware compatibility.
GRADING POLICIES:
The standing of a student in each course is expressed by one of the following letters and corresponding grading system:
A – 100 – 93
B – 92 – 83
C – 82 – 70
D – 69 – 60
F – 59 or less

See your Syllabus Supplement for individual instructor practices.

The Chipola Catalog provides specific information regarding other outcomes from the grading system. A student’s Grade Point Average is derived from the grading system/quality point scale.

DISCIPLINE-SPECIFIC (TECHNOLOGY) COMPETENCIES / LEARNING OUTCOMES:
COP 2224 is not a General Education Core course. However, it does address competence in the Technology Area.
T1 Use a computer to create, save, copy, and print files.
T2 Access and use appropriate software in the content area.

STUDENT LEARNING OUTCOMES/OBJECTIVES FOR COP 2224:
See chart, last page.

MEANS OF ACCOMPLISHING OUTCOMES:
• Read and study assigned material from the text;
• Complete practice exercises and daily assignments and submit in a timely manner;
• Pursue independent study using resource materials available in the library (books, periodicals, videos), the Tech Center lab, and any other pertinent source;
• Demonstrate your mastery of the required skills on quizzes, in-class projects, and exams.

LIBRARY AND ON-LINE REFERENCE MATERIALS:
The library is a comprehensive, learning resource center providing information in print, electronic, and multimedia format to support the educational objectives of the College. In addition to print media, online catalogs and resources can be accessed through www.lincweb.org and www.netlibrary.com. Library hours are posted each semester at the building entrance.

Chipola’s website is located at www.chipola.edu.

See your Syllabus Supplement for individual instructor recommendations and resources.

TECHNOLOGY RESOURCES:
The Information Technology Center, located in the library, is equipped with computer workstations. Lab hours are posted each semester at the building entrance.
ASSIGNMENT SCHEDULE:
See your Syllabus Supplement for individual instructor assignment schedule.

ATTENDANCE AND WITHDRAWAL POLICIES:
Chipola College expects regular attendance of all students. Students who are absent from classes for any reason other than official college activities must satisfy the instructor concerned that the absence was due to illness or other clearly unavoidable reasons. Otherwise, the student may suffer grade loss at the discretion of the instructor.

Chipola policy allows each instructor to specify in the course handout the attendance policy. It also allows the instructor to decide whether or not an absence is excusable and what effect the absence or tardy may have on the grade.

A student is allowed to repeat a course a maximum of three (3) times. **On the third attempt a student (1) must bear the full cost of instruction, (2) cannot withdraw, and (3) must receive a grade.**

See your Syllabus Supplement for individual instructor or department-specific attendance and withdrawal policy.

MAKE-UP POLICY:
Chipola allows each instructor to specify in the instructor handout the makeup policy. Please see your first day handout for individual instructor policy.

ACADEMIC HONOR CODE POLICY:
Students are expected to uphold the Academic Honor Code. Chipola College’s Honor Code is based on the premise that each student has the responsibility to
1) uphold the highest standards of academic honesty in his/her own work;
2) refuse to tolerate academic dishonesty in the college community; and
3) foster a high sense of honor and social responsibility on the part of students.

Further information regarding the Academic Honor Code may be found in the Chipola Catalog, Student Governance section.

STUDENTS WITH DISABILITIES POLICY:
Chipola College is committed to making all programs and facilities accessible to anyone with a disability. Chipola’s goal is for students to obtain maximum benefit from their educational experience and to effectively transition into the college environment.

Students with disabilities are requested to voluntarily contact the Office of Students with Disabilities to complete the intake process and determine their eligibility for reasonable accommodations.
## LINKING COURSE-LEVEL LEARNING OUTCOMES WITH DISCIPLINE-SPECIFIC COMPETENCIES AND ASSESSMENT METHODS

<table>
<thead>
<tr>
<th>COURSE-LEVEL STUDENT LEARNING OUTCOMES FOR COP 2224</th>
<th>COLLEGE-LEVEL AND DISCIPLINE-SPECIFIC GENERAL EDUCATION COMPETENCIES*</th>
<th>ASSESSMENT METHODS ** USED BY INSTRUCTOR</th>
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<tbody>
<tr>
<td>The student will:</td>
<td></td>
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<tr>
<td>describe the program development life cycle;</td>
<td>LA, OT, Q</td>
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<tr>
<td>describe the process required to enter, store,</td>
<td>LA, OT, Q</td>
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<tr>
<td>translate, and execute a program on a computer;</td>
<td></td>
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<tr>
<td>identify and define characteristics of an</td>
<td>LA, OT, Q</td>
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<tr>
<td>object-oriented language;</td>
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<tr>
<td>determine the output that would be produced by</td>
<td>LA, OT, Q</td>
<td></td>
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<tr>
<td>C++ program segments containing statements</td>
<td></td>
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<tr>
<td>covered in class;</td>
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<tr>
<td>identify syntax and logic errors in C++ program</td>
<td>LA, OT, Q</td>
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<tr>
<td>segments containing statements and constructs</td>
<td></td>
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<tr>
<td>covered in class;</td>
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<tr>
<td>recognize and use program documentation tools and</td>
<td>LA, PROJ</td>
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<tr>
<td>recommended programming techniques;</td>
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<tr>
<td>apply principles of good program design to</td>
<td>LA, PROJ</td>
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<td>develop problem solutions;</td>
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<tr>
<td>use the C++ language subset covered in the course</td>
<td>T1, T2</td>
<td>LA, OT, PROJ</td>
</tr>
<tr>
<td>to solve programming problems involving the use</td>
<td></td>
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<tr>
<td>of standard I/O, computations, user-defined data</td>
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<td></td>
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<tr>
<td>types, decisions, loops, arrays, records, files,</td>
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<tr>
<td>pointers, and classes.</td>
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* For a list of Chipola’s College-Level Competencies, see [www.chipola.edu](http://www.chipola.edu).

**Assessment Method Codes**

<table>
<thead>
<tr>
<th>LA</th>
<th>OT</th>
<th>PROJ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Assignments</td>
<td>Objective Tests</td>
<td>Projects</td>
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</tbody>
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