Common Course Outline

CINS 227

Object Oriented Programming Using C++

4 Semester Hours

The Community College of Baltimore County

Description

Object Oriented Programming Using C++

Studies Object Oriented Programming (OOP) paradigm using the C++ Programming Language; discusses Object Oriented programming techniques such as data encapsulation, constructor and destructor functions, polymorphism, inheritance, and virtual functions, operator and function overloading, dynamic memory allocation, and input/output techniques.

3 credits: 2 lecture hours, 2 laboratory hours.

Prerequisite: CINS 225 or CMSC 201 consent of the Program Director

Overall Course Objectives

Upon completion of this course the student will be able to:

A. Design, code, and debug C++ programs
B. Describe the principles of Object Oriented Programming
C. Design programs using Object Oriented Programming techniques
D. Describe and implement classes
E. Define and utilize overloaded operators
F. Explain and describe examples of encapsulation, polymorphism, and inheritance
G.

Major Topics

A. Review of C functions, pointers, and data structures
B. C++ input/output system
C. Introduction to Object Oriented Programming philosophies
D. C++ extension to C
E. Classes, scope resolution operator
F. C++ free store
G. Constructors and destructors
H. Overloading operators
I. Friend functions
J. Templates
K. Inheritance and virtual functions
L. Exceptions

Course Requirements

Grading: Grading procedures will be determined by the faculty member, will be provided the first week of class, and will include:

1. Minimum of 6 programming projects
2. Minimum of 6 tests or quizzes.
3. Comprehensive final exam.

Other Course Information

This course meets the programming language requirement in CIS: Programming and is a CIS elective.
This course is taught in a computerized environment.

Date Revised: 6/1/00