

Common Course Outline
CSIT 215
Object Oriented Programming Using C++
4 Semester Hours

The Community College of Baltimore County

Description

CSIT 215 – 4 credits - Object Oriented Programming Using C++ covers 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.

4 credits: 4 lecture hours per week

Prerequisite: CSIT 214 (same as CINS 225) or consent of the Program Director.

Overall Course Objectives

Upon successfully completing the course students will be able to:

1. design, code, and debug C++ programs;
2. describe the principles of object oriented programming;
3. design programs using object oriented programming techniques;
4. describe and implement classes;
5. define and utilize overloaded operators;
6. write programs using encapsulation;
7. use polymorphism; and
8. implement inheritance.

Major Topics

- I. Review of C functions, pointers, and data structures
- II. C++ input/output system
- III. Introduction to object oriented programming concepts
- IV. C++ extension to C
- V. Classes
- VI. Scope resolution operator
- VII. C++ free store
- VIII. Constructors and destructors
- IX. Overloading operators
- X. Friend functions
- XI. Templates
- XII. Inheritance and virtual functions

XIII. 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 5 programming projects*
2. Minimum of 2 tests
3. Comprehensive final exam or programming project

*These projects will include collaborative work, written portions and oral presentations as assigned by the faculty member.

Other Course Information

This course is an Information Technology elective.