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

Community College of Baltimore County

Description

CSIT 215 – 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.

Revised: 06/26/19