

Master Syllabus

CIS 1202 - C++ Software Development

Division: Business and Public Services

Department: Computer Information Systems

Credit Hour Total: 3.0

Lecture Hrs: 3.0

Prerequisite(s): CIS 1111

Date Revised: December 2015

Course Description:

A continuation of C++ software development building on prior software development studies. Topics include arrays, searching and sorting, pointers, characters and strings, structures, file operations, C++ classes, inheritance, polymorphism, virtual functions, exceptions, templates, the Standard Template Library (STL), problem analysis and C++ software solution design, coding and testing.

General Education Outcomes:

- Critical Thinking/Problem Solving Competency

Course Outcomes:

C++ Classes

Create C++ classes using inheritance, polymorphism and virtual functions.

Assessment Method: Locally developed exams
Performance Criteria:

70% or higher on a standard rubric

Assessment Method: Simulations
Performance Criteria:

70% or higher on a standard rubric

Abstract Data Structures

Develop abstract data structures

Assessment Method: Locally developed exams
Performance Criteria:

70% or higher on a standard rubric

Assessment Method: Simulations
Performance Criteria:

70% or higher on a standard rubric

Pointers and references

Use pass by value, pass by pointer and pass by reference when passing data to functions.

Assessment Method: Locally developed exams
Performance Criteria:

70% or higher on a standard rubric

Assessment Method: Simulations
Performance Criteria:

70% or higher on a standard rubric

Problem Analysis and C++ Software Solution Design, Coding and Testing

Analyze problem assignments and design, code and test C++ software solutions.

Assessment Method: Locally developed exams
Performance Criteria:

70% or higher on a standard rubric

Assessment Method: Simulations
Performance Criteria:

70% or higher on a standard rubric

Outline:

Introduction to C++ software development building on prior software development studies including the following topics:

- Arrays searching and sorting

- ▣ Pointers and references
- ▣ Characters, strings and string classes
- ▣ Structured Data and Abstract Data Structures
- ▣ Advanced File Operations
- ▣ C++ Classes
- ▣ C++ software solution design, coding and testing
- ▣ Problem Analysis
- ▣ Inheritance, polymorphism and virtual functions
- ▣ Exception templates and the Standard Template Library (STL)