

**NorthWest Arkansas Community College
Business and Computer Information Course Outline**

PROG 2203 C++ PROGRAMMING II (On Demand)

Catalog Description

The second course in the C++ sequence is intended to continue the study of high-level programming concepts and to increase the skills necessary to program competently. Object Oriented Programming topics will be emphasized. (Outside lab time will be required.)

Prerequisite: PROG 1203 C++ Programming I

Credit Hours: 3

Target Audience

This course is for students seeking training in programming languages, applicable to students seeking self-improvement or an AAS Degree in Computer Information.

General Course Objectives

Knowledge:

- Demonstrate competency in the C++ programming language.
- Demonstrate the ability to handle objects and pointers.
- Demonstrate the ability to design and implement complex data structures.
- Demonstrate the ability to design and create complex programs.

Critical Thinking:

- Design a solution for a specific task.
- Implement the design as a computer application using the C++ programming language.
- Analyze the output of the resulting application for accuracy.

Academic Skills:

- Apply computational and algebraic skills to problems.

Required Text

Starting Out with C++, Alternate Fourth Edition, Tony Gaddis, PHE / Scott/Jones: 2004.
ISBN 1-57676-344-X.

Topics/Software

Software:

- C++ Integrated Development Environment (editor, compiler, linker),
Visual Studio 6.0 preferred

Required Topics:

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|----------|-----------------------|
| Pointers | Polymorphism |
| Lists | Polymorphic Functions |
| Stacks | Inheritance |
| Queues | Template Classes |
| Classes | |

Instructional Activities

- Computer Lab: Students will require additional time in the computer lab to complete Programming projects.
- Projects/ Assignments: Outside programming projects plus a Final Programming project