

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

PROG 1203 C++ PROGRAMMING I (On Demand)

Catalog Description

The student will gain even greater proficiency in high-level programming, including the manipulation of data structures and the basics of Object Oriented Programming. (Outside lab time will be required.)

Prerequisite

PROG 1103 Beginning VISUAL BASIC Programming or prior equivalent programming experience

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 C++ programming language.
- Demonstrate the ability to manipulate arrays
- Demonstrate the ability to manipulate files.
- Demonstrate an understanding of object-oriented programming
- Demonstrate the ability to design and create complex programs from technical descriptions.

Critical Thinking:

- Design a solution for a specific task
- Implement the solution 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(s)

Starting Out with C++, Alternate Version, Fourth Edition, Tony Gaddis, PHE / Scott/Jones: 2004. ISBN 1-57676-334-X.

Topics/Software

Software:

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

Required Topics:

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|---|--------------------------|
| Structured programming concepts | Structs |
| Control structures: sequence, selection, repetition | Classes |
| Operator precedence and associativity | Object-oriented concepts |
| Defining functions | Enumerated types |
| Arrays and array manipulations | File I/O |

Optional topics:

- Pointers