

NorthWest Arkansas Community College
Business & Computer Information Systems Division
Computer Information Department Course Outline

PROG 1203 C++ PROGRAMMING (F, S)

Catalog Description

This is an introductory programming course for students wanting to enter the software development career field and/or pursue a Computer Science or Computer Engineering degree. Successful completion of this course will give the students a firm grounding in software development using the C++ language. Course topics include data representation, structured programming with conditional and iterative structures, functions, arrays, strings, console and file I/O, and an introduction to object-oriented programming. (Outside lab time will be required.)

Prerequisites

PROG 1003 Introduction to Programming Logic

Credit hours/Contact hours/Load hours

3/3/3

Target Audience/Transferability

This course is for students seeking training in application development, or students seeking self-improvement or an AAS Degree in Computer Information.

Student Learning Outcomes

The student will:

- Develop and design appropriate decision and looping structures, procedures and functions
- Describe and document a program's purpose
- Debug and correct a program
- Create a program to read/write the data in/from external file given a set of data
- Load, organize and search given data in an array
- Manipulate multi-dimensional arrays given a set of data
- Design appropriate structures for a given set of related data,
- Create and use pointers to arrange given related data into a List, Queue, or Stack
- Search, organize, delete and add nodes to a given Linked List, Queue and Stack

Topics

- Structure of C++ Language
- Arrays – Single and Multi-dimensional
- Sequential Files
- Object-Oriented Programming and Design
- Introduction to pointers and dynamic memory, using Lists, Stacks, Queues

Forms of Assessment

Chapter quizzes
Programming projects
Final Programming Project