

Northwest Arkansas Community College
Business and Computer Information Systems Division

Discipline Code

PROG

Course Number

1203

Course Title

C++ Programming

Catalog Description

(F,S) 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.) Prerequisite: PROG 1003.

Prerequisites

PROG 1003

Credit Hours

3 Credit Hours

Contact hours

45 Lecture/Lab Contact Hours

Load hours

3 Load Hours

Semesters Offered

Fall, Spring

ACTS Equivalent

None

Grade Mode

A-F

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

General Education Outcomes Supported

None

Standard Practices

None

Topics list

- 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

Learning activities

- Assignments and Projects
- This course requires some in class, hands-on work and also additional hands-on work in a virtual or on-campus computer lab.

Assessments

Homework, Quizzes, and Exams.

Grading guidelines

- A = 90-100%
- B = 80-89%
- C = 70-79%
- D = 60-69%
- F = 0-59%