

CSC 134 C++ Programming

COURSE DESCRIPTION:

Prerequisites: None

Corequisites: None

This course introduces computer programming using the C++ programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test and debug at a beginning level.

Course Hours per Week: Class, 2. Lab, 3. Semester Hours Credit, 3.

LEARNING OUTCOMES:

Upon completing requirements for this course, the student will be able to:

1. Create a software application using the C++ programming language.
2. Debug a software application written in the C++ programming language.
3. Test a software application written in the C++ programming language.

OUTLINE OF INSTRUCTION:

- I. Introduction to Computers, Programming and C++
- II. Expressions and Interactivity
- III. Making Decisions
- IV. Loops and Files
- V. Functions
- VI. Arrays and Vectors
- VII. Sorting and Searching
- VIII. Pointers
- IX. Working with Characters
- X. File Operations
- XI. Structured Data
- XII. Classes, Inheritance, Polymorphism, Virtual Functions
- XIII. Exceptions and Templates
- XIV. Standard Template Library
- XV. Linked Lists
- XVI. Stacks and Queues
- XVII. Recursion

REQUIRED TEXTBOOK AND MATERIAL:

The textbook and other instructional material will be determined by the instructor.