

CS 2433: C/C++ Programming

Required Course: Elective

Course Number: CS 2433

Course Name: C/C++ Programming

Credit Hours: 3

Lecture Hours: 3

Lab Hours: 0

Instructors: Dr.Richard L.Churchill

Dr.Sachin Jain

Dr.A.T.Burrell

In this course, an online textbook and assignment system, called zybooks is used.

Book Title: Programming in C++ uaing zylabs.

Other books:

Book Title(s): The C programming Language, 2nd edition.

Book Author(s): Kernigan and Ritchie.

Book Title(s): Absolute C++, 4th edition

Book Author(s): Walter Savitch

Course Description: C/C++ programming language types, operators, expressions, control flow, functions, structures, pointers, arrays, UNIX interface. Basic object-oriented programming using C++ and the related language syntax and functionality.

Course Prerequisites: CS 1113 (Computer Science I(A)) with a grade of “C” or better

Course Goals: Some of the main course goals are:

- Develop a basic understanding of the programming environment.
- Improve programming skills of students.
- Allow students to design, write and implement programs in C/C++.
- Give students a basic understanding of Object-Oriented Programming.

Student Outcomes: At the end of this course, the students will be able to achieve the following:

Student Outcomes	Course Outcomes
2	<ul style="list-style-type: none">• Write good C and C++ code.• Use good programming style for writing code in C/C++.
6	<ul style="list-style-type: none">• Design C/C++ programming solutions to problems.• Acquire a basic understanding of algorithms.

Course Topics:

- Introduction to C/C++.
- Variables, Branches and Loops.
- Arrays/Vectors
- User defines functions
- Objects and classes
- Pointers
- Streams
- Inheritance
- Recursion
- Exceptions
- Templates, Containers
- Searching and sorting algorithms