

Introduction to C++ Programming

Nature of the course: Theory + Practical

Total hours per day: 2 hours

Course duration: 4 weeks

Course Summary

This is a self-paced course that will teach you how to use the C++ programming language. The building of command-line programs that use various data kinds, expressions, decision branching, and iteration to solve issues are some of the subjects that will be discussed. The information on C++ programming is provided in four weeks of interactive lectures with weekly quizzes to check your understanding. By the end of the session, students will get hands-on experience writing C++ programs.

Completion Criteria

After fulfilling all of the following criteria, the student will be deemed to have finished the Module:

1. Has attended 90% of all classes held
2. Has received an average grade of 80% on all assignments
3. Has received an average of 60% in assessments
4. The tutor believes the student has grasped all of the concepts and is ready to go on to the second module.

Required Text Books

1. C++ Primer 5th Edition
2. C++ in One Hour a Day, Sams Teach Yourself 8th Edition
3. C++ All-in-One For Dummies 3rd Edition

Course Details

WEEK 1

Introduction

- C++ Overview
- C++ Basic Syntax
- C++ Comments
- C++ Data Type
- C++ Variable Type
- C++ Variable Scope
- C++ Storage class
- C++ Operator
- C++ Loop Type

WEEK 2

Fundamentals

- C++ Decision Making
- C++ Function
- C++ Numbers
- C++ Array
- C++ String
- C++ Pointer
- C++ References
- C++ Date & Time
- C++ Basic Input/Output
- C++ Data Structures

WEEK 3

Object Oriented

- C++ Object Oriented
- C++ Inheritance
- C++ Overloading
- C++ Polymorphism
- C++ Abstraction
- C++ Encapsulation
- C++ Interface

WEEK 4

Advanced

- C++ Files and Streams
- C++ Exception
- C++ Dynamic Memory
- C++ Namespaces
- C++ Templates
- C++ Web programming
- C++ Multithreading

Learning Outcomes

- Ability to understand everything from the fundamentals to object-oriented design.
- Enable you to develop everything from simple programs to automate repetitive chores to larger applications, allowing you to handle more specialist topics like Data Science and Artificial Intelligence with python.