

# Introduction to Programming Using C++

Course length: 1 day

## Course Description

You have come across various applications that have software components. All software applications run on programming languages. In the Introduction to Programming Using C++ course, you will use general programming concepts with special emphasis on object-oriented programming to write simple programs in C++. You will also handle exceptions and remove errors in programs.

**Course Objective:** You will learn the basic concepts of programming using C++ as the tool for learning.

**Target Student:** This course is intended for students with no prior academic background in a field other than computer science or programming, who wish to embark on a course of study that will prepare them for employment as professional software developers. Students who interact on a business basis with software development professionals and need to improve communications through better understanding of the concepts and terminology used by professional programmers will also benefit equally.

**Prerequisites:** Students should be familiar with using personal computers with a mouse and keyboard. Basic typing skills are mandatory. Students should be comfortable in the use of Windows 2000, XP, or Vista environment.

- Microsoft Windows Vista Level 1
- Microsoft Windows XP Professional Level 1
- Windows 2000 Introduction

**Delivery Method:** Instructor led, group-paced, classroom-delivery learning model with structured hands-on activities.

## Course Content

### Lesson 1: Introduction to Programming

Topic 1A: Overview of Programming

Topic 1B: Introduction to the Software Development Life Cycle

### Lesson 2: Creating Simple Programs

Topic 2A: Work with Variables

Topic 2B: Use Input and Output Streams

Topic 2C: Work with Operators

Topic 2D: Work with Conditional Structures

Topic 2E: Work with Loops

Topic 2F: Work with Arrays

### Lesson 3: Creating Programs Using Functions

Topic 3A: Create Functions

Topic 3B: Create a Recursive Function

Topic 3C: Work with Built-In Functions

### Lesson 4: Implementing Object-Oriented Methodology

Topic 4A: Create a Class

Topic 4B: Create an Object

Topic 4C: Create a Constructor

Topic 4D: Create a Subclass



### **Lesson 5: Handling Programming Errors**

Topic 5A: Fix Syntax Errors

Topic 5B: Fix Logical Errors

Topic 5C: Fix Runtime Errors

