

C++ Programming Course

Course Overview

The **C++ Programming Course** is a comprehensive, beginner-friendly, and job-oriented training program designed to build a strong foundation in Object-Oriented Programming (OOP) and software development. Students will learn C++ from basic syntax to advanced programming concepts, including classes, objects, inheritance, polymorphism, templates, file handling, and the Standard Template Library (STL). Through hands-on coding exercises and real-world projects, learners will develop the skills required for software development, competitive programming, game development, and advanced technologies.

Course Duration

- **Duration:** 2 Months
 - **Mode:** Online / Offline
 - **Live Projects:** 6+
 - **Assignments:** 50+
 - **Certificate:** Included
 - **Placement Assistance:** Included
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Course Fee

₹2,500/- Only

Course Curriculum

Module 1: Introduction to C++



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- Introduction to C++
 - Features of C++
 - Installing Code::Blocks / Visual Studio Code
 - Structure of a C++ Program
 - Compilation & Execution
 - Input & Output (cin & cout)
 - Comments & Coding Standards
 - Tokens & Keywords
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Module 2: Variables & Data Types

- Variables
 - Constants
 - Data Types
 - Operators
 - Type Conversion
 - Scope of Variables
 - Storage Classes
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Module 3: Control Statements

- if Statement
 - if-else Statement
 - Nested if
 - switch-case
 - for Loop
 - while Loop
 - do-while Loop
 - break & continue
 - goto Statement
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Module 4: Functions

- Function Declaration
- Function Definition
- Function Calling
- Function Overloading

- Default Arguments
 - Inline Functions
 - Recursive Functions
 - Scope Resolution Operator
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Module 5: Arrays & Strings

- One-Dimensional Arrays
 - Two-Dimensional Arrays
 - Multi-Dimensional Arrays
 - Character Arrays
 - String Class
 - String Functions
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Module 6: Object-Oriented Programming (OOP)

- Classes & Objects
 - Constructors
 - Destructors
 - Access Specifiers
 - Encapsulation
 - Inheritance
 - Polymorphism
 - Function Overriding
 - Operator Overloading
 - Abstraction
 - Friend Functions
 - Static Members
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Module 7: Pointers & Dynamic Memory

- Pointer Basics
- Pointer Arithmetic
- Arrays with Pointers
- Objects & Pointers
- Dynamic Memory Allocation
- new & delete Operators



- Smart Pointer Introduction
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Module 8: File Handling

- File Streams
 - Reading Files
 - Writing Files
 - Appending Data
 - Binary Files
 - Error Handling
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Module 9: Standard Template Library (STL)

- Vectors
 - Lists
 - Queues
 - Stacks
 - Maps
 - Sets
 - Iterators
 - Algorithms
 - Sorting
 - Searching
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Module 10: Projects & Interview Preparation

- Student Management System
- Library Management System
- Banking System
- Employee Management System
- Inventory Management System
- Quiz Application
- Mini Calculator
- Tic-Tac-Toe Game
- Coding Challenges
- Interview Preparation

Technologies Covered

- C++ Programming
 - Object-Oriented Programming (OOP)
 - Standard Template Library (STL)
 - GCC Compiler
 - Code::Blocks
 - Visual Studio Code
 - Git & GitHub (Basics)
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Live Projects

- Student Management System
 - Library Management System
 - Banking System
 - Employee Management System
 - Inventory Management System
 - Quiz Application
 - Tic-Tac-Toe Game
 - Console-Based Billing System
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Career Opportunities

After completing this course, students can apply for roles such as:

- C++ Developer
- Software Developer
- Junior Software Engineer
- Application Developer
- Game Developer (Foundation)
- Embedded Systems Developer
- Programming Trainee
- Competitive Programmer



Prerequisites

- Basic Computer Knowledge
 - No Prior Programming Experience Required
 - Suitable for School Students, College Students, Freshers, and Working Professionals
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Certification

Students will receive:

- C++ Programming Course Completion Certificate
- Live Project Certificate
- Internship Certificate (*if applicable*)
- Placement Assistance
- Resume Building & Interview Preparation



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