🧠 C++ Programming Program

Power, Performance, and Object-Oriented Design—Master Them All with C++.
C++ is a **powerful, high-performance language** used in system software, game development, real-time simulations, and performance-critical applications. It brings together **the speed of C** and the power of **Object-Oriented Programming (OOP)**, forming the foundation for modern programming languages and applications.
At **Certed Technologies**, our **C++ Programming Program** is designed to help you **understand core concepts, develop real-world applications, and prepare for technical interviews and advanced software roles.**

🌍 Why C++? Why Now?

C++ is not just a stepping stone—it's a **career-defining language** used in the development of operating systems, databases, game engines, and performance-sensitive apps.

Why learning C++ still matters in 2025:

- 🚀 Used extensively in **game engines**, simulations, embedded systems, and finance

- 🎯 Core to **DSA, competitive programming, and technical interviews**

- 🧱 Bridges procedural and object-oriented thinking

- 🔥 Still powers applications at Microsoft, Google, Amazon, and large-scale systems

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👨‍🏫 Learn from Real-World C++ Practitioners

Our instructors are experienced **software engineers, competitive programmers, and system architects**. The course blends theory with **hands-on coding, real projects, and DSA integration**, making you **interview-ready and project-capable.**

🌐 Program Highlights

Feature	Details
Duration	1.5 Months / 50–60 Hours
Delivery Mode	Hybrid (Online + Offline)
Tools Covered	Code::Blocks, VS Code, g++, CLion, Online IDEs
Project Work	3 Mini Projects + 1 Capstone Project
Certifications	Certed Technologies Certificate + C++ Proficiency Badge
Career Support	DSA Practice, Resume Building, Interview Preparation

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🔍 What You'll Learn

📘 Module 1: Introduction to C++

- History & Evolution of C++

- C vs C++ – Key Differences

- Structure of a C++ Program

- Compiling and Executing C++ Code

📘 Module 2: Variables, Data Types & Operators

- Keywords, Identifiers, Constants

- Type Modifiers, Type Casting

- Arithmetic, Logical, Bitwise Operators

📘 Module 3: Control Flow

- Conditional Statements (if, if-else, switch)

- Loops (for, while, do-while)

- Jump Statements (break, continue, goto)

📘 Module 4: Functions & Arrays

- Defining and Calling Functions

- Function Overloading

- Arrays (1D, 2D, Multidimensional)

- Array of Functions and Recursion

📘 Module 5: Object-Oriented Programming (OOP)

- Classes and Objects

- Constructors and Destructors

- Inheritance, Polymorphism, Abstraction, Encapsulation

- Static Members, Friend Functions

- Operator Overloading

📘 Module 6: Pointers, Memory & STL

- Pointers and Dynamic Memory Allocation

- References and Function Pointers

- Introduction to Standard Template Library (STL):

    - Vectors, Maps, Sets, Pairs

    - Iterators, Algorithms, and Lambda Functions

📘 Module 7: File Handling and Capstone Project

- File Operations: Reading, Writing, Appending

- Serialization using Files

- Capstone Project Examples:

  - Student Report Management System

  - Inventory Billing System

  - Bank Management System

🎯 Who Should Enroll?

Ideal for:

- Engineering/BCA/MCA students from any year

- Students preparing for **competitive programming or placements**

- Professionals transitioning into **system-level development, game dev, or finance tech**

- Anyone with a basic understanding of C or Python looking to level up in OOP

💼 Career Outcomes

Post-program, learners are equipped for roles like:

- Software Developer (C/C++)

- System/Embedded Programmer

- Game Engine Developer

- Competitive Programmer

- Algorithm Developer

Sectors Hiring for C++ Skills:
Game Development | FinTech | Embedded Systems | High-Frequency Trading | OS/Compiler Development | Automotive

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💡 Tools & Platforms Covered

Code::Blocks | Visual Studio Code | g++ Compiler | CLion | HackerRank/LeetCode | GitHub | Linux Terminal

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🛠️ Sample Project Ideas

- Student Grade Report Generator

- Employee Record Management System

- Digital Library Catalog

- Tic Tac Toe / Snake Game using OOP

- File Encryption and Compression Tool

📜 Certification

Earn a **Certed Technologies Certificate** and a **C++ Programming Proficiency Badge**, validating your ability to work with both procedural and object-oriented systems.

📣 What Makes This Course Unique?

✅ Real-World OOP with File Handling & STL
✅ Strong DSA Integration for Placements
✅ Aligned with GATE/Interview Syllabus
✅ Prepares for Advanced Languages (Java, C#, etc.)
✅ High-Performance Problem Solving with C++

📅 Upcoming Batch

Batch Start Date	Mode	Status
15 July 2025	Online	Open
22 July 2025	Offline	Few Seats Left
05 August 2025	Hybrid	Open

🏢 Custom C++ Training for Colleges & Corporates

We offer tailored training for:

- College students (C++ + DSA for Placement Bootcamps)

- Embedded/C++ Developer onboarding

- Competitive Programming Camps

- OOP + STL Masterclasses

🔧 Customization Options

- Add DSA Integration (Sorting, Trees, Graphs)

- Include Interview Track (LeetCode, GFG)

- Use Linux + Competitive Coding Environment

- Custom Projects + Evaluation Tests

📞 Talk to an Advisor

🎓 Ready to Code with Power and Precision?

"If C is the foundation, C++ is the architecture that builds empires of software."
Get placement-ready, system-strong, and coding-confident—learn C++ today.

[📌 Enroll Now]   [📞 Request a Callback]

❓ Frequently Asked Questions (FAQs)

1. **Is this course beginner-friendly?**
   Yes! It starts from the basics and goes into advanced OOP and STL concepts.

2. **Do I need to know C before learning C++?**
   It helps, but not required. We introduce everything from scratch.

3. **Will this course help in interviews?**
   Absolutely. C++ is often used in DSA and interview questions.

4. **Is STL covered in this program?**
   Yes, vectors, maps, sets, pairs, and iterators are fully explored.

5. **What can I build by the end of this course?**
   You'll build complete applications like management systems and file-driven tools using real-world logic.