



ELEVO LABS

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Course Overview

Course Details

Course Name: C++: The Complete Guide to Object-Oriented Programming

Instructor: Isabella Rossi

Created On: 16 June, 2025

Updated On: 16 June, 2025

Price: 7000 INR

Duration: 10 weeks

Modules: 8

Language: English, Hindi

Level: Intermediate

Certifications: Yes

Course Description

Take your programming skills to the next level with C++. This course builds on foundational programming concepts to introduce the powerful paradigm of Object-Oriented Programming (OOP). You will learn to design and implement classes, manage object lifecycles, and use inheritance and polymorphism to create flexible and reusable code. We'll explore advanced topics like templates for generic programming and provide a comprehensive introduction to the Standard Template Library (STL), a powerful collection of containers and algorithms.

What You'll Learn:

- The core principles of Object-Oriented Programming (OOP).
- Classes, objects, constructors, and destructors.
- Inheritance and Polymorphism (Virtual Functions).
- Function and Operator Overloading.
- Templates for generic programming.
- The Standard Template Library (STL): Vectors, Maps, Lists, and Algorithms.
- Exception handling for robust code.

Who Is This Course For?

This course is for students and developers who have a basic understanding of a programming language like C and want to master OOP and modern C++.

Course Curriculum Details

Module 1: Module 1: From C to C++

2 Lessons

1. C++ Introduction **20min**

2. Basic Input/Output (`cin`, `cout`) **20min**

Module 2: Module 2: Classes and Objects

2 Lessons

1. Defining Classes **30min**

2. Constructors and Destructors **30min**

Module 3: Module 3: Inheritance

2 Lessons

1. Base and Derived Classes **35min**

2. Access Specifiers and Types of Inheritance **30min**

Module 4: Module 4: Polymorphism

2 Lessons

1. Function and Operator Overloading **35min**

2. Virtual Functions and Runtime Polymorphism **40min**

Module 5: Module 5: Advanced OOP

1 Lessons

1. Abstract Classes and Friend Functions **30min**

Module 6: Module 6: Templates

1 Lessons

1. Function and Class Templates **35min**

Module 7: Module 7: The Standard Template Library (STL)

2 Lessons

1. Containers (Vector, Map, List) **40min**

2. Iterators and Algorithms **30min**

Module 8: Module 8: Final Project

1 Lessons

1. Build an Object-Oriented Application **2hr**

This curriculum is subject to minor adjustments to ensure the most up-to-date and effective learning experience.