Basics of C++ Programming

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Course Details:

Name	Basics of C++ Programming
Course **Duration**	30 hours

C++ is an object-oriented programming language. It is an extension to C programming. It is being widely used in embedded programming, The C++ Language is developed for creating system applications that directly interact with the hardware devices such as drivers, kernels, etc.

It is essential for the graduates and professionals to learn basics of C++ as it is the most sought after object oriented programming language.

Objectives of Training

- Provide minds-on and hands-on training
- Understand C++ and its usages
- Understand object-oriented concepts
- Understand basics of programming
- Learn how to write algorithms and convert them into program
- Enhance logical thinking

Outcome of Training
- Trainees should be able to independently write programs for a given problem
- Training on C++ enable trainees to solve objective and programming type questions. This would help them to prepare for placements/switch career.

Syllabus

Module	Topics
Module 1 – Introduction to C++	✓ Introduction to C++ ✓ Features of C++ ✓ Usages of C++ ✓ History of C ✓ Getting started with C++ ✓ Flow of C++ program ✓ Datatypes in C++ ✓ cout,cin,endl ✓ Keywords ✓ Operators ✓ Comments

	✓ Writing simple programs
Modules 2 –C++ Control Statements	✓ If-else ✓ switch ✓ Loops – do-while,while,for ✓ Break,continue ✓ goto ✓ Type Casting ✓ Sample programs
Module 3 – Functions	✓ What is a function ✓ Call by value and call by reference ✓ Recursion ✓ Storage class ✓ Sample programs
Module 4 – Arrays	✓ 1-D Array ✓ Multi-dimensional arrays ✓ Array to function ✓ Sample programs
Module 5 –Pointers	✓ Introduction to pointers ✓ Pointer to pointer ✓ Pointer Arithmetic ✓ Dynamic memory allocation ✓ Sample programs
Module 5 –Object Oriented Programming	✓ OOPS concept ✓ Constructor ✓ Destructor ✓ this pointer ✓ statics ✓ structs ✓ Enumeration ✓ Friend function ✓ Inheritance ✓ Polymorphism ✓ Abstraction ✓ Namespaces
Module 6 –String and Math	✓ Strings in C++ ✓ String functions ✓ Math functions ✓ Sample programs

Module 7 – Exceptions	✓ Exception management ✓ Try/catch ✓ User defined exceptions
Module 8 –File and stream Handling	✓ File handling in C++ ✓ Streams – input,output ✓ Sample programs
Module 9 –Data structures	✓ Data structures ✓ List,Set,Queue ✓ Stack,Map ✓ Sample programs
Module 10 – Mock test and Assessments	✓ Mock test ✓ Assessment