

Syllabus for C++ Programming



Course Duration for C++ Programming Course

- 45 – 50 days

Objective For C++ Programming Course

- Getting the student to be well trained in C Programming

Eligibility for C++ Programming Course

- Any Technical Graduates or Undergraduate (BSc, BCS, BCA, BE, B Tech, MSc, MCS, MCA, M Tech)

Course overview For C++ Programming Course

Programming in 'C++'

Introduction to Object Oriented Programming

- Concept of OOP
- Features of OOP
- Introduction of 'C++'
- Structure of 'C++' Program
- Executing and Debugging a 'C++' Program

'C++' Tokens and Type Casting

- Keywords and Identifiers
- Operators
- Constants
- Variables
- Data Types
- Precedence of Operators
- Scope and Lifetime of Variables

Classes and Objects

- Classes & Object Specifier
- Defining data members and member function
- Array of objects
- Managing console I/O
- 'C++' stream classes
- Formatted and unformatted console I/O
- Usage of manipulators

Function in 'C++'

- Call by reference, Return by reference
- Function overloading and default arguments.
- Inline function
- Static class members
- Friend functions
- Virtual functions

Constructor and Destructor

- Concept of Constructor
- Types of Constructors
- Memory allocation (new and delete)
- Usage of destructor

Operator Overloading

- Overloading Unary and Binary operators
- Overloading using friend function

Inheritance

- Types of inheritance
- Virtual base classes and abstract base classes
- Constructor and destructor in derived class

Working with files

- File operations
- File pointer and their manipulation
- File updation with random access

Exception Handling

- Various Exception Handling classes
- Implementing try and catch block
- Use of throw keyword

Templates

- Introduction to Templates
- Class templates, function templates and overloading of function templates
- Standard Template Library (STL)
- Run Time Type Identification(RTTI)

Project on C++ Programming Course

Student will be assigned a project which they will have to execute under the guidance of the faculty.