Curriculum for the course of

C++ programming language

Course Instructor -

Learning objectives

c++ is a powerful general-purpose programming language.It can be used to develop operating systems, browsers, games, and so on. c++ supports different ways of programming like procedural,object oriented,functional and so on. This makes c++ powerful as well as flexible.

Learning outcomes -

At the end of the course participants will be able to -

- To describe the advantages of a high level language like c/c++, the programming process and the compilation process.

-to design, debug, implement and test programmes using the fundamental elements of c/c++.

Prerequisites

There are no prerequisites required for the course. But only a little knowledge of programming languages is a benefit for candidates.

Schedule

No	Topic	Total Duration
1	Introduction,control statement,loop functions	
2	Array,pointer,string	
3	Object-oriented programming(oops),inheritance,poly morphism,data encapsulation	
4	C++ exception, c++ file and stream	
5	Standard Template Library (STL)	

<u>Curriculum</u> -

1. <u>Introduction</u>

a) c++ programming
b) data types
c) variables
d) keywords
e) operators
f) expressions

2. Control statements

a) if-else
b) switch
c) for loop
d) while loop
e) do-while loop
f) break statement
g) continue statement
h) goto statement

3. Functions

a) C++ functions
b) Call by value
c) Call by reference
d) Recursion

4. Array

a) C++ array
b) Array to function
c) 2-d array

5. Pointer

a) C++ pointer
b) Sizeof() operator
c) Array of pointer
d) Function pointer
e) Malloc vs new operator

6. Strings

a) C++ strings

7. OOPs

a) oops concept
b) classes
c) objects
d) encapsulation
e) polymorphism
f) Inheritance
g) types of inheritance
h) constructor
i) destructor

8. C++ exceptions

a) Exception handling
b) Try, catch, throw

9. C++ file and stream

a) file and stream
b) getline()

10. Standard Template Library (STL)

1. Introduction to STL
2. Sorting
3. Searching
4. Vectors
5. List