



LAKSHYA INSTITUTE OF TECHNOLOGY

BCA, BSc ITM and BSc CS

Affiliated to Utkal University

RASHMI RANJAN DAS

Ph - 7978092277



C++ TRAINING SYLLABUS

Basic in C++:

- Introduction to Languages
- Procedure Oriented Programming
- Object Oriented Programming
- Introduction to C++
- C++ programming format
- Variables, Data Types, Modifier, Qualifiers, Storage class, Operators
- Array, Pointer, Reference and Scope Resolution Operators

Control Structures:

- Conditional – if, if...else, Nested if...else, Switch...Case
- Loops – While, do...While, For, Nested Loops
- Jump – Goto, Continue & Break

Functions:

- Introduction
- Defining a Function
- Function Prototype and Function Call
- Actual and Formal Parameters
- Call by Value
- Call by Reference
- Call by Pointer
- Default Arguments
- Inline Functions
- Difference between inline and normal functions
- Function Overloading





LAKSHYA INSTITUTE OF TECHNOLOGY

Affiliated to Utkal University

RASHMI RANJAN DAS

Ph - 7978092277

C++ TRAINING SYLLABUS

Oops Concepts:

- Introduction to OOPS
- Encapsulation
- Class
- Object
- Abstraction
- Polymorphism
- Inheritance
- Static and Dynamic Binding

Classes and Objects:

- Class Declaration
- Access Specifiers
- Data Members and Member Functions
- Creating Objects
- Differences between class and structure
- Passing arguments to functions
- Objects as Arguments
- Returning Objects
- Static Data Members
- Static Member Functions
- Friend Functions
- Friend Classes

Operator Overloading:

- Need of Overloading
- Operator Overloading Rules
- Overloading Unary Operators
- Overloading Unary Operators using Friend
- Overloading Binary Operators
- Overloading Binary Operators using Friend
- Overloading Other Operators





LAKSHYA INSTITUTE OF TECHNOLOGY

Affiliated to Utkal University

RASHMI RANJAN DAS

Ph - 7978092277

C++ TRAINING SYLLABUS

Constructors and Destructors:

- Introduction and need
- Defining Constructor
- Differences between constructor and Member
- Function
- Types of Constructors
- Constructor Overloading
- Default Arguments in Constructor
- Destructor
- Defining Destructor

Inheritance:

- Introduction
- Types of Inheritance
- Single Level Inheritance
- Multilevel Inheritance
- Multiple Inheritance
- Hybrid Inheritance
- Hierarchical Inheritance
- Base Class
- Derived Class
- Inheritance Scope
- Protected Members
- Virtual Base Class
- Virtual Destructors

Advanced Class Concepts:

- Container Class & Contained Class
- Local Classes
- Inheritance v/s Containership





C++ TRAINING SYLLABUS

Polymorphism and Virtual Functions:

- Types of Polymorphism
- Static and Dynamic Binding.
- Function Overriding.
- Differences between Overloading and Overriding.
- Virtual Functions
- Pure Virtual Functions

Templates

- Need of Template
- Defining Template
- Function Templates
- Class Templates

Exception Handling:

- What is Exception?
- Need of Handling Exceptions
- Types Of Exceptions
- Exception Handling Mechanism

Streams:

- Hierarchy of I/O Streams
- Istream Class Functions
- Ostream Class Functions
- IOS Class Functions
- Manipulators

Files:

- Hierarchy of File Streams
- Opening a File
- File Opening Modes
- Sequential Access Files
- Random Access Files
- Command Line Arguments