

C++ syllabus

Day	Chapter	Topics	Hours
Day 1 Day 2	Object Oriented Programming Principles	<ul style="list-style-type: none"> • Need of OOPs, difference b/w structured & OOPs • What are objects, features • OOPs Features • Classes & objects • Encapsulation • Inheritance • Polymorphism • Data Abstraction 	2
Day 3	Introduction C++	<ul style="list-style-type: none"> • History, Features • Rules of C++ programming • Structure of C++ program • C++ Tokens • (Identifiers, Keywords, Constants, Operators, Special characters) • C++ Data types • (Basic, Derived, User defined) 	1
Day 4 Day 5 Day 6	Basic programming	<ul style="list-style-type: none"> • Console I/O Statements(cin, cout) • Programs to perform various calculations • Operators • Programs to implement various operators 	3
Day 7 Day 8 Day 9	Control statements	<ul style="list-style-type: none"> • Conditional Control Statements <ul style="list-style-type: none"> ◦ If-else , switch-case • Loops <ul style="list-style-type: none"> ◦ While, do while, for • Implementing programs on conditional & loops • break, continue, goto keywords 	3
Day 10 Day 11 Day 12	Arrays	<ul style="list-style-type: none"> • Definition, advantages • Array types • Single dimension • Double dimension • Declaration, accessing array data • Implementation of array operations 	3

Day	Chapter	Topics	Hours
Day 13 Day 14	Functions	<ul style="list-style-type: none"> • Definition, advantages, types of functions, classification • Implementing various kinds of functions • Inline functions 	2
Day 15 Day 16 Day 17 Day 18	Object Oriented Programming	<ul style="list-style-type: none"> • Defining a Class ,creating Objects • Accessing Data Members using objects • Calling Member Functions using objects • Implementing Array of Objects, objects as parameters & return type, new , this operators • Scope resolution operator • access specifiers(private, public, protected) • Implementing Static Data Members • Implementing Static Member Functions 	4
Day 19	Function Overloading	<ul style="list-style-type: none"> • What is function over loading • Implementing overloading on various functions 	1
Day 20	Operator Overloading	<ul style="list-style-type: none"> • Definition, why it is required, advantages • About operator keyword, rules of operator overloading • Overloading various operators 	1
Day 21 Day 22	Constructors & Destructors	<ul style="list-style-type: none"> • Definition, uses • Types (Default Constructor, Parameter Constructor, Copy Constructor) • Destructors 	2
Day 23 Day 24	Friend Function & Friend classes	<ul style="list-style-type: none"> • Friend Function definition, usage of friend keyword • Implementing of friend functions in various scenarios • Friend Class definition, usage • Implementing of friend class 	2

Day	Chapter	Topics	Hours
Day 25 Day 26 Day 27 Day 28 Day 29	Inheritance	<ul style="list-style-type: none"> • Definition, Advantages • Types of Inheritances (Single, Hirerchial, Multilevel, Multiple Hybrid) • Implementing various kinds of inheritances • Implementing various constructors in inheritance • Implementing function over riding • Implementing various access levels in inheritance 	5
Day 30 Day 31	Virtual Functions & Abstract Classes	<ul style="list-style-type: none"> • Definition, requirement, • How to implement • Pure virtual function definition • Implementing abstract classes 	2
Day 32 Day 33 Day 34	Templates	<ul style="list-style-type: none"> • Template Definition • Generic Function • Generic Class • Template function Overloading 	3
Day 35 Day 36 Day 37 Day 38	I/O Streams & Files	<ul style="list-style-type: none"> • Streams Hierarchy • Input Streams & Output Streams • What is File? • Implementing various file operations on basic data types(write, read, append and modify) • Implementing various file operations on object data types(write, read, append and modify) • Random Access Files(seekp, seekg, tellp, tellg) 	4
Day 39 Day 40	Formatted IO	<ul style="list-style-type: none"> • IO Flags • Io Functions 	2
Day 41 Day 42	Exception Handling	<ul style="list-style-type: none"> • Try, catch, throw 	2