

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
CHHATTISGARH INSTITUTE OF TECHNOLOGY, JASHPUR (C.G.)

LESSON PLAN SESSION JAN – JUN 2025

SUBJECT: **OOP USING C++**

SEMESTER: **4TH**

BRANCH: - **COMPUTER SCIENCE & ENGINEERING**

UNIT NUMBER	NAME OF THE TOPIC	NO OF CLASS REQUIRED	REMARK
UNIT 01: Fundamentals of Object oriented Programming	1.1 Evolution of OOP 1.1.1 Comparison OOP and POP	01	
	1.2 Features of OOP 1.2.1 Objects 1.2.2 Class	01	
	1.2.3 Data Hiding, Encapsulation	01	
	1.2.4 Dynamic Binding & 1.2.5 Message Passing	01	
	1.2.6 Inheritance 1.2.7 Polymorphism	01	
	1.3 Benefits OOP 1.4 Applications of OOP	01	
	1.5 C++ Keywords 1.6 Structure of C++ Program	01	
	1.7 Basic Data Types and user defined data types	01	
	1.8 Operators 1.9 Manipulators	01	
	Doubt Class, Assignment and Quiz	01	
Unit 02: Functions and Classes	2.1 Functions 2.1.1 Prototyping, call by refernce	01	
	2.1.2 Nesting Functions	01	
	2.1.3 Recursive Functions and Function Overloading	01	
	2.2 Introduction to Classes & Objects 2.2.1 Types of Classes	01	
	2.2.2 Defining Data Members & Member Functions	01	
	2.3 Object Creation & Memory Allocation	01	
	2.4 Arrays in Class 2.5 Array of Objects	01	
	2.6 Static Members 2.7 Access Specifiers	01	
	2.8 Streams 2.9 Templates	02	
	Doubt Class, Assignment and Quiz	01	
Unit 03: Constructors and Destructors	3.1 Constructors 3.1.1 Concept of Constructors	01	
	3.1.1 Initialization using Constructors	01	
	3.1.2 Multiple Constructors	01	
	3.1.3 Types of Constructors	01	
	3.2 Destructor	01	
	Doubt Class, Assignment and Quiz	01	

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Unit 04: Operator overloading and Inheritance	4.1 Operator Overloading – Definition	01	
	4.2 Rules		
	4.3 Unary Operator Overloading	01	
	4.4 Binary Operator Overloading	01	
	4.5 Type Conversions	01	
	4.6 Inheritance	01	
	4.6.1 Derived Classes		
	4.6.2 Types of Inheritance	01	
4.6.3 Private member funtions			
4.6.3 Constructors in Derived Classes	01		
Doubt Class, Assignment and Quiz	01		
Unit 05: Polymorphism and Pointers	5.1 Polymorphism & Its Types	01	
	5.2 Pointers in C++	01	
	5.2.1 Pointer to Objects	01	
	5.2.2 this Pointer		
	5.3 Virtual & Pure Virtual Functions	01	
Doubt Class, Assignment and Quiz	01		
Total Class Required		40	

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