

## Lesson Plan

Name of Faculty : Ms.Bharti Sethi, Assistant Professor ,CSE  
 Discipline : Computer Science and Engineering  
 Semester : 3<sup>rd</sup> sem(odd)  
 Subject : Object Oriented Programming using C++ (IT-202E)  
 Lesson Plan Duration : 15 weeks (from August2022 to Dec-2022)  
 Work Load (Lectures) per week (in hours): Lectures-03 hours

Week	Theory		Topic Covered, Date and Remarks		
	Lecture- Day	Topic (Including Assignment/Test)	Date	HOD	Director-Principal
1 <sup>st</sup>	1.	Introduction to C++,C++ Standard Library, Basics of a Typical C++ Environment			
	2	Pre-processors Directives, Illustrative Simple C++ Programs			
	3	Header Files and Namespaces, library files.			
2 <sup>nd</sup>	4	Introduction to Objects and Object Oriented Programming,			
	5	Access Modifiers: Controlling access to a class method			
	6	variable (public, protected, private, package)			
3 <sup>rd</sup>	7	Polymorphism: Overloading,			
	8	Encapsulation (Information Hiding)			
	9	Inheritance, and their types			
4 <sup>th</sup>	10	Overriding Methods			
	11	Abstract Classes, Reusability, Class's Behaviour			
	12	Classes and Data Abstraction: Introduction, Structure Definitions, Accessing Members of Structures			
5 <sup>th</sup>	13	Class Scope and Accessing Class Members			
	14	Controlling Access Function And Utility Functions			
	15	Class Objects: Constructors, Using Default Arguments With Constructors			
6 <sup>th</sup>	16	Using Destructors, Classes : Const(Constant) Object And Const Member Functions			
	17	Initializing Object as Member of Classes, Friend Function and Friend Classes			
	18	Using This Pointer, Separating Interface from Implementation			
7 <sup>th</sup>		.....1 <sup>st</sup> Minor Test.....			
8 <sup>th</sup>	19	Container Classes And Integrators			
	20	Proxy Classes, Function overloading.			
	21	Operator Overloading: Introduction, Fundamentals of Operator Overloading, Restrictions On Operators Overloading			
9 <sup>th</sup>	22	Operator Functions as Class Members vs. as Friend Functions, Overloading			
	23	<<, >> Overloading Unary Operators, Overloading Binary Operators			
	24	<b>Inheritance:</b> Introduction, Inheritance: Base Classes And Derived Classes			
10 <sup>th</sup>	25	Protected Members, Public, Protected and Private Inheritance			
	26	Casting Base- Class Pointers to Derived- Class Pointers			
	27	Using Member Functions, Overriding Base –Class Members in a Derived Class			
11 <sup>th</sup>	28	Using Constructors and Destructors in derived Classes			
	29	Implicit Derived –Class Object To Base- Class Object Conversion			
	30	<b>Virtual Functions and Polymorphism:</b> Introduction to Virtual Functions, Polymorphism			
12 <sup>th</sup>	31	Abstract Base Classes And Concrete Classes, Dynamic Binding			
	32	New Classes And Virtual Destructors			
	33	<b>Files and I/O Streams:</b> Files and Streams, Creating a Sequential Access Creating A Random Access File			
13 <sup>th</sup>	34	Unformatted I/O (with read and write)			
	35	Reading Data Sequentially from a Random Access File.			
	36	File Reading Data From A Sequential Access File, Updating Sequential Access Files, Random Access Files			
14 <sup>th</sup>		.....2 <sup>nd</sup> Minor Test.....			
15 <sup>th</sup>	37	<b>Templates &amp; Exception Handling:</b> Function Templates			
	38	Overloading Template Functions			
	39	Throwing an Exception, Catching an Exception Rethrowing an Exception			

Sr.	Comments	HOD	Director- Principal
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			