Lesson Plan

Name of the Faculty: **Ms, Indu**
Discipline: Computer Engg.
Semester: 4th
Subject: Object Oriented Programming
Lesson Plan Duration: 16 Weeks
Work Load (Lecture/Practical) per week (In Hours): Lectures-03, Practicals - 06)

	Theory			
Week	**Lecture Day**	**Topic (Including assignment / Test)**	**Practical Day**	**Experiment Name**
1st	1st	Introduction and features of C++	1st	Write a function using variables as arguments to swap the values of a pair of integers
	2nd	Procedure oriented prog. Vs object oriented prog.		
	3rd	Oops concepts – classes, reusability, encapsulation		
2nd	4th	Polymorphism , dynamic binding, message passing	2nd	Consider a shopping list of items for which we place an order with a dealer every month. The list includes such as the code number and price of each item we should like to perform operations such as adding an item to the list, deleting an item from the list
	5th	Data hiding, applications of oops		
	6th	Language constructs of c and C++		
3rd	7th	Variables, data type	3rd	Write a prog. To read name, roll number, internal-external marks using classes and display the same on the
	8th	Type declaration		
	9th	User defined data types		
4th	10th	Increment and decrement operator	4th	Write a program of swapping of numbers by accessing private numbers using friend function.
	11th	Relational and logical operator		
	12th	If than else clause, Conditional expressions		
		Input and output statements, loops	5th	Define a class to represent a bank account using constructor including the following data members:- i) for single customer ii) for

5th	13th			n customers a) Name of the depositors b) account number c) type of account d) balance amount in the account member functions:- -to assign initial values - to deposit an amount -to withdraw an amount after checking the balance -to display the name and balance.
	14th	Switch case, arrays		
	15th	Union, functions		
6th	16th	Pointers, pre-processors directives	6th	Create 2 classes OM and DB which store the value of distance. DM stores distances in meters and Db in feet and inches. Write a program that can read values for the class objects and add 1 object OM with another object of DB. Use a friend function to carryout the
	17th	Header files, Scope resolution operator		
	18th	Mapping console i/o operations		
7th	19th	C++ stream, formatted and unformatted console	7th	A books shop maintains the inventory of books that are being sold at the shop the list includes details such as author, title, publisher and stock position. Whenever a customer wants the book, the sales person inputs the title and author and the system search the list and display whether it is available, the total cost of the required copies is displayed
	20th	Creation and accessing class members		
	21st	Private vs public class		
8th	22nd	Constructor and destructor with and without arguments	8th	Define a class string that could work as a user defined string type include constructors that will enable us to create an un-initialized
	23rd	Object creation and accessing		

	24th	Dynamic memory allocation with new and delete operator		string.
9th	25th	Intro to member functions and method definition	9th	Create a class float that contains 2 float data members. Over load all the 4 arithmetic operators so that do operate on the objects of float.
	26th	Inline function implementation		
	27th	Constant member functions		
10th	28th	Static function, this pointer	10th	
	29th	Friend function and its characteristics		Programming Exercise on hybrid inheritance.
	30th	Introduction to operator overloading, need of operator overloading		
11th	31st	Prefix and postfix notation, binary operator overloading	11th	Define 2 classes POLAR and RECTANGLE to represent points in the POLAR and RECTANGLE systems. Use conversion routines to convert from one system to the other.
	32nd	Type conversion, rules of operator overloading		
	33rd	Comparison between function overloading and overriding		
12th	34th	Introduction to inheritance, types of	12th	Create a base class called shape, use this class to store two double type values that could be used to compute the area of fig. Derive the specific class called TRIANGLE and RECTANGLE from the data shape. Add to base class a
	35th	Single, hierarchical, multiple and hybrid		
	36th	Protected data, public data and private data		
	37th	Inheriting constructors and destructors,	13th	Exercise on file handling.

13th	38th	Constructors and destructors of derived classes and virtual functions		
	39th	Size of a drived class, order of invocation		
14th	40th	Introduction to Polymorphism and virtual functions, importance of V.F.		
	41st	Function call binding, virtual function		
	42nd	Implementing late binding, need for virtual function		
15th	43rd	Abstract base classes and pure virtual function		
	44th	Virtual destructor		
	45th	Introduction to file and streams, components of a file		
16th	46th	Different operation of the file, communication in files		Continue……
	47th	Creation of file streams, stream classes, header files and updating of file		
	48th	File pointers, function manipulation and detecting end of file		