

### Lesson Plan

**Name of Faculty :** Ms Varsha Rani, Assistant Professor of CSE  
**Discipline :** Computer Science and Engineering  
**Semester :** 3<sup>rd</sup> SEM(odd)  
**Subject :** C ++ Programming Lab.cse 205L  
**Lesson Plan Duration :** 15 weeks (from JULY/AUG-2020 to NOV/DEC-2020)  
**Work Load (Lecture/Practical) per week (in hours):** Lectures-04hours, Practical-02 hours

Week	Theory/ Practical (Group-I/ II)		Topic Covered Date and Remarks		
	Practical Day	Topics/ Programs	Date	HOD	Director-Principal
1 <sup>st</sup>	1	C++ program print ASCII value of a character and convert lower to upper			
2 <sup>nd</sup>	2	WAP to create class to get and print detail of a student			
3 <sup>rd</sup>	3	Raising a number n to a power p is the same as multiplying n by itself p times. Write a function called power ( ) that takes a double value for n and an int value for p, and returns the result as double value. Use a default argument of 2 for p, so that if this argument is omitted, the number will be squared. Write a main ( ) function that gets values from the user to test this function.			
4 <sup>th</sup>	4	o classes DM and DB which store the value of distances. DM stores distances in metres and centimeters and DB in feet and inches. Write a program that can read values for the class objects and add one object of DM with another object of DM function to carry out the addition operation. The object that stores the results maybeobject or DB object, depending on the units in which the results are required.DISPLAY should be in the format of feet and inches or metres and centimetres depending on the object on display.			
5 <sup>th</sup>	5	class rational which represents a numerical value by two double values- NUMERATOR & DENOMINATOR. Include the following public member Functions CONSTRUCTOR with no argument destructor with two arguments. reduce( ) that reduces the rational number by eliminating the highest common factor between the numerator and denominator. • Overload + operator to add two rational number. • Overload >> operator to enable input through cin. • Overload << operator to enable output through cout. Write a main ( ) to test all the functions in the class.			
6 <sup>th</sup>	6	A hospital wants to create a database regarding its indoor patients. The information to store include a) Name of the patient b) Date of admission c) Disease d) Date of discharge Structure to store the date (year, month and date as its members). Create a base class to store above information. The member function should include functions to enter information list of all the patients in the database. Create a derived class to store the age of the . List the information about all the to store the age of the patients. List the information about all the pediatric patients (less than twelve years in age).			
7 <sup>th</sup>		<b>Minor Test 1<sup>st</sup></b>			
8 <sup>th</sup>	7	C++ program to use function as a L-VALUE using reference variable			
9 <sup>th</sup>	8	Write a program to access a function with the help of pointer			
10 <sup>th</sup>	9	Make a class Employee with a name and salary. Make a class Manager inherit from Employee. Add an instance variable, named department, of type string. Supply a method to to String that prints the manager's name, department and salary. Make a class Executive inherit from Manager. Supply a method to String that prints			

		the string “Executive” followed by the information stored in the Manager superclass object. Supply a test program that tests these classes and methods.			
11 <sup>th</sup>	10	Imagine a tollbooth with a class called toll Booth. The two data items are a type unsigned int to hold the total number of cars, and a type double to hold the total amount of money collected. A constructor initializes both these to 0. A member function called payingCar ( ) increments the car total and adds 0.50 to the cash total. Another function, called nopayCar ( ), increments the car total but adds nothing to the cash total. Finally, a member function called displays the two totals. Include a program to test this class. This program should allow the user to push one key to count car, and another to count a non paying car. Pushing the ESC key should cause the program to print out the total cars and total cash and then exit.			
12 <sup>th</sup>	11	function called reversit ( ) that reverses a string (an array of char). Use a for loop that swaps the first and last characters, then the second and next to last characters and so on. The string should be passed to reversit ( ) as an argument. a program to exercise reversit ( ). The program should get a string from the user, call ( ), and print out the result. Use an input method that allows embedded blanks. Test the program with Napoleon’s famous phrase, “Able was I ere I saw Elba”.			
13 <sup>th</sup>	12	Program to write and read an object in ,from binary file using write ( ) and read ( ) in C++			
14 <sup>th</sup>		<b>Minor Test 2<sup>nd</sup></b>			
15 <sup>th</sup>	13	C++ program to implement string in ST			