Lesson Plan

Name of Faculty	:	**Sonam, Assistant Professor of CSE**
Department	:	**Computer Science and Engineering**
Semester	:	**3rd (Odd)**
Subject	:	**Data Structure & Algorithm Lab using C/C++ (CSE-201- P)**
Lesson Plan Duration	:	**15 weeks (from August-December-2020)**

Work Load (Lecture/Practical) per week (in hours): Lectures-08 hours (04hours of G-3rd & 04hours of G-4th)

Week	Theory/ Practical (Group-3rd/ 4th)		Topic Covered Date and Remarks		
	Practical Day	**Topics/ Programs**	**Date**	**HOD**	**Director-Principal**
1st	1	**Two assignments related to creating and manipulating matrices and linear lists.** Write the programs in C/C++ to find Matrix Addition, Subtraction, Transpose, Multiplication.			
2nd	2	**Two assignments on array and linked implementation of stacks.** Write the programs in C/C++ to Implement Push and Pop operation on Stack using Array.			
3rd	3	**Two assignments on array and linked implementation of Queue.** Write the programs in C/C++ to Implement Insertion and deletion operation on Queue using Array.			
4th	4	**Two assignments on trees and their applications.** Write the programs in C/C++ to traverse a tree in Pre-order, In-order and Post-order manner			
5th	5	**Two assignments on graphs and their applications.** Write the programs in C/C++ to Implement Depth First and breadth First Search in a Graph			
6th	6	**Two assignments associated with linked list, operations on linked lists and their applications.** Write the programs in C/C++ to Creating a linked list, Inserting and Deletion an element in a linked list			
7th		**Minor test 1st**			
8th	7	**Two assignments on different searching and sorting methods along with their complexity analysis.** Write the programs in C/C++ to Implement Linear and Binary Search.			
9th	8	Write the programs in C/C++ to Implement Bubble, Selection, Insertion Sort.			
10th	9	**One assignment on challenging problems on data structures to be given in groups.**			
11th	10	Write the programs in C/C++ to Inset and Delete an element from Binary Search tree			
12th	11	Write the programs in C/C++ to find shortest path in a weighted/directed Graph using Warshall's Technique.			
13th	12	**One assignment on challenging problems on data structures to be given in groups.**			
14th		**Minor test 2nd**			
15th	13	Write the programs in C/C++ to Implement Merge, Quick, Heap and Shell Sort.			