STATE INSTITUTE OF ENGINEERING & TECHNOLOGY
DEPARTMENT OF COMPUTER ENGINEERING
LESSON PLAN

Name of Faculty:- Ms. Monika, Ms. Divya
Subject Name: - DAA
Branch/Semester: - 4th Sem.
Subject Code: - B24-CSE-204

Lecture No.	Unit No	Topics To Be Covered	Cos Covered
L 1	Unit-1	Elementary Data Structures	CO-1
L 2		Algorithms and its complexity (Time and Space),	
L 3		Algorithm Analysis (Worst, Best & Average case),	
L 4		Pseudocode Conventions,	
L 5		Asymptotic Notations,	
L 6		Binary Search Trees	
L 7		Recurrence Relation	
L 8		Methods for solving Recurrence (Substitution)	
L 9		Recursion Tree	
L 10		Master Theorem	
L 11		Master Theorem	
L 12	Unit-2	Dynamic Programming: - Elements	CO-2
L 13		Matrix-chain multiplication	
L 14		Longest common subsequence	
L 15		Greedy Algorithms: - Elements	
L 16		Activity Selection problem	
L 17		Huffman codes	
L 18		Task scheduling problem, Knapsack Problem	
L 19		Graph Coloring	
L 20		N-Queen Problem	
L 21		Hamiltonian Path and Circuit	
L 22		Review of Graph Algorithms:- Traversal method (Breadth first search)	CO-3

L23	Unit-3	Review of Graph Algorithms:- Traversal method(Depth first Search)	
L 24	Unit-3	Topological sort	CO-3
L 25		Strongly connected components	
L 26		Minimum Spanning Tree- Prims	
L 27		Minimum Spanning Tree-Kruskal	
L 28		Single Source shortest path,	
L 29		Relaxation, Dijkstra's Algorithm,.	
L 30		Bellman-Ford Algorithm,	
L 31		Single source shortest path for directed acylic graphs,	
L 32		All pair shortest path- Floyd Warshall Algorithm	
L 33	Unit-4	Polynomial and Non-Polynomial Complexity	CO-4
L 34		NP-Hard and NP-Complete Classes	
L 35		The Naïve string-matching algorithm	
L 36		Rabin-Karp Algorithm	
L 37		Rabin-Karp Algorithm	
L 38		String matching with finite automata	
L 39		String matching with finite automata	

Text Books:

1. Corman, Leiserson and Rivest : Introduction to Algorithms, 2/e, PHI

2. Harsh Bhaisn, Algorithms: Design And Analysis Oxford University Press,2015.

Reference Books:

1. Aho, Hopcroft and Ullman : The Design and Analyses of Computer Algorithms. Addison Wesley.

2. R.B.Patel, Expert Data Structures with C, Khanna Publications , Delhi, India, 2ndEdition 2004, ISBN 81-87325-07-0, pp.1-909.

3. R.B.Patel& M.M.S Rauthan, Expert Data Structures with C++, Khana Publications, Delhi, India, 2ndEdition 2004,ISBN : 87522-03-8.

4. Horowitz, Ellis and Sahni, Sartaj : Fundamentals of Computer Algorithms, Galgotia Publications