

MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH AND STUDIES

(Deemed to be University under section 3 of the UGC Act 1956)

PC-CS-M-211: ADVANCE ALGORITHMS LAB

Periods/week	Credits	Max.
Marks : 100		
P: 4	2	Internal
: 50		
Duration of Examination: 3 Hrs		External
: 50		

Students are expected to develop skills to design and implement various algorithms outlined in the syllabus. They must design and use appropriate data structures for designing the algorithms and implement them in C or C++ Language.

Following are some of the suggested topics for the Lab Practicals:

Implement DFS and BFS procedures to search a node in a graph.

Implement a solution to find maximum weight maximal independent set from a set of connected nodes.

Implement Edmond's Blossom algorithm for computing augmenting path.

Implement Strassen's algorithm for matrices multiplication using divide and conquer paradigm.

Implement Prim's algorithm to find minimum spanning tree.

Implement matrix chain multiplication solution using dynamic approach.

Implement Floyd-Warshall algorithm to find the shortest path in a graph.

Implement Fast Fourier Transform procedure.

Implement approximate solution for Travelling Salesman Problem.

Implement approximate solution for set covering problem.

