**FUNDAMENTAL OF ALGORITHM**

SUBJECT DESCRIPTION

* Introduction, Implementation Issues, Analyzing Algorithms
* Model of Computation
* Brute-Force Algorithm, Running Time Analysis
* Analysis of the brute-force maxima algorithm
* Plane-sweep Algorithm its analysis and Comparison to Brute-force Algorithm
* Divide and Conquer Strategy, Merge Sort
* The Iteration and Recursion Tree Methods for Solving Recurrence Relations
* Analysis of selection, Sorting, Heaps
* Greedy Algorithms, Examples: Counting Money and Huffman Encoding
* Graphs: Representations, Traversal
* Breadth-first Search, Generic Graph Traversal Algorithm
* Computing MST: Generic Approach, Greedy MST
* Kruskal’s Algorithm and Prim’s Algorithm
* Dijkstra’s Algorithm, Bellman-Ford Algorithm