

M.Tech (AI) ALGORITHMS COURSE TENTATIVE SCHEDULE
AUGUST-DEC 2026
Tuesday: 10AM – 12PM and Friday: 11AM - 1PM

DATE	TOPIC	REMARKS
14 AUGUST	Introduction	
18 AUG	O Notation; Discussion on Sorting and Complexity Analysis; Best, Worst and Average case analysis	
21 AUG	Heaps; Priority queues; Amortized Analysis	
25 AUG	Divide and Conquer: Binary Search, Merge Sort; Solving Recurrence Relations	Assignment-1
28 AUG	Quick Sort Algorithm Complexity Analysis	
1 SEPT	Divide and Conquer: Closest pair of points	
4 SEPT	Greedy strategy: MST (Prim's and Kruskal's) Complexity Analysis	
8 SEPT	Knapsack (KP) Problem - Discussion of Greedy Strategy	Assignment -2 (Greedy)
11 SEPT	Dynamic Programming: 0/1 KP, 0/N KP Problem	
15 SEPT	Coin Change Problem Chained Matrix Multiplication	
18 SEPT	MINOR -1	
22 SEPT	TSP; OBST Discussion on DP	Assignment-3 (DP)
25 SEPT	Exploring Graphs by BFS; Shortest Paths: Dijkstra algo	
29 SEPT	Shortest Paths: Floyd Warshall, Singlesource-O(N) algo, Bellman-Ford algorithm	
02 OCT		HOLIDAY
06 OCT	DFS on Directed Graphs: Topological Sorting	
09 OCT	Strongly connected components	Assignment-4
13 OCT	Applications of DFS: Backtracking	
16 OCT	Branch and Bound : KP revisited	
20 OCT		HOLIDAY
23 OCT	MINOR-2	
27 OCT	Branch and Bound Strategy	Group Assignment (GA) (announcement)
30 OCT	Theory of NP-Completeness	

M.Tech (AI) ALGORITHMS COURSE TENTATIVE SCHEDULE
AUGUST-DEC 2026
Tuesday: 10AM – 12PM and Friday: 11AM - 1PM

3 NOV	Theory of NP-Completeness	
6 NOV	Theory of NP-Completeness	
10 NOV	GA Presentations	
13 NOV	GA Presentations	
17 NOV		

Evaluation :

Minor-1 and Minor-2 : 20 Marks each

Minor-3: Assignments + GA (20 Marks) (Compulsory)

INTERNALS (40) : Best of Minors 1, 2 (20 Marks) + Minor 3 (20 Marks)

MAJOR : 60 Marks

IT LAB (ALGO) (Thursdays: 9AM - 12PM)

DATE	TENTATIVE TOPIC	Details
27 AUG	Appreciating Complexity	
10 SEP	Greedy strategy	
24 SEP	DP strategy	
08 OCT	Minor	
22 OCT	Backtracking	
05 NOV	Branch and Bound / Game problems	

Evaluation :

Minor: 10 Marks

Lab Assignments: 20 Marks (Best 4 out of 5 lab submissions)

INTERNALS : 30 Marks

MAJOR : 20 Marks