

YouTube Links for the video lectures by Preetpal Kaur Buttar, Assistant Professor, Department of Computer Science and Engineering, SLIET, Longowal.

Subject	Design and Analysis of Algorithms
Relevant Subject Codes in UG/ICD Programmes	PCCS-621
YouTube Channel Link	https://www.youtube.com/channel/UC8-6C07P7JYuNwBZ8-2RDow

Sr . No.	Chapter	Name of the Topic	Video Number	Video Link
1	Greedy algorithms	Finding the minimum number of coins	1	https://www.youtube.com/watch?v=tb8bfH-C7mU&list=PLxy6eHDXqomP7EbdggYBu50URYxsTmnVp&index=1
		Knapsack problem	2	https://www.youtube.com/watch?v=dqTbx5o1Pwo&list=PLxy6eHDXqomP7EbdggYBu50URYxsTmnVp&index=2
		Job-sequencing problem	3	https://www.youtube.com/watch?v=PQMwS-XJ2h8&list=PLxy6eHDXqomP7EbdggYBu50URYxsTmnVp&index=3
		Minimum cost spanning trees	4	https://www.youtube.com/watch?v=g6NzldLrGY&list=PLxy6eHDXqomP7EbdggYBu50URYxsTmnVp&index=4
		Single-source shortest paths (Dijkstra's algorithm)	5	https://www.youtube.com/watch?v=FHSni9o5XMo&list=PLxy6eHDXqomP7EbdggYBu50URYxsTmnVp&index=5
		Optimal tree problem (Huffman coding)	6	https://www.youtube.com/watch?v=zM0g2CsDGCE&list=PLxy6eHDXqomP7EbdggYBu50URYxsTmnVp&index=6
2	Dynamic programming	Introduction to dynamic programming	7	https://www.youtube.com/watch?v=3CojnLcFB-E&list=PLxy6eHDXqomO2XJ2CgJafeNkXc3xWIGZD&index=1
		Coin change problem	8	https://www.youtube.com/watch?v=fGTs7fNeYe&list=PLxy6eHDXqomO2XJ2CgJafeNkXc3xWIGZD&index=2
		0-1 Knapsack problem	9	https://www.youtube.com/watch?v=jqktUzvRwDQ&list=PLxy6eHDXqomO2XJ2CgJafeNkXc3xWIGZD&index=3
		Matrix chain problem	10	https://www.youtube.com/watch?v=SpXEyiLYEA8&list=PLxy6eHDXqomO2XJ2CgJafeNkXc3xWIGZD&index=4
		All-pairs shortest path (Floyd-Warshall's algorithm)	11	https://www.youtube.com/watch?v=SPd8E0ZO GmM&list=PLxy6eHDXqomO2XJ2CgJafeNkXc3xWIGZD&index=5
		Longest increasing subsequence	12	https://www.youtube.com/watch?v=tnxYiH7CFLc&list=PLxy6eHDXqomO2XJ2CgJafeNkXc3xWIGZD&index=6

		Bellman-Ford algorithm	13	https://www.youtube.com/watch?v=SLgCjZeWCqE&list=PLxy6eHDXqomO2XJ2CgJafeNkXc3xWIGZD&index=7
		Minimum edit distance	14	https://www.youtube.com/watch?v=T2pi5kcGfn8&list=PLxy6eHDXqomO2XJ2CgJafeNkXc3xWIGZD&index=8
3	Backtracking	Introduction to backtracking	15	https://www.youtube.com/watch?v=EA_VbyGA_A8E&list=PLxy6eHDXqomMiP8WV94yWrv2GOjT_UN0h&index=1
		n-queens problem	16	https://www.youtube.com/watch?v=rrZJF0oOJ-0&list=PLxy6eHDXqomMiP8WV94yWrv2GOjT_UN0h&index=2
		Subset-sum problem	17	https://www.youtube.com/watch?v=3QwADTQMODI&list=PLxy6eHDXqomMiP8WV94yWrv2GOjT_UN0h&index=3
		Graph coloring	18	https://www.youtube.com/watch?v=j1HD61yRw2Y&list=PLxy6eHDXqomMiP8WV94yWrv2GOjT_UN0h&index=4
		Hamiltonian cycles	19	https://www.youtube.com/watch?v=3T50u3aPFus&list=PLxy6eHDXqomMiP8WV94yWrv2GOjT_UN0h&index=5
4	Branch-and-bound	Introduction and job assignment problem	20	https://www.youtube.com/watch?v=2uAzcakFh9Y&list=PLxy6eHDXqomPeAHgPJuz0yu6_8l_eeZ8h&index=1
		0-1 knapsack problem	21	https://www.youtube.com/watch?v=e8rPkrKfKfg&list=PLxy6eHDXqomPeAHgPJuz0yu6_8l_eeZ8h&index=2
		Traveling salesperson problem	22	https://www.youtube.com/watch?v=OooCklFWBLo&list=PLxy6eHDXqomPeAHgPJuz0yu6_8l_eeZ8h&index=3