

Lecture number	Date	Lectures	Section	HWKS	CLRS 3rd edition readings
1	22-Sep	Introduction, big-O notation			Chapter 2
2	24-Sep	Continue asymptotic notation, Gale-Shapley alg			Chapter 3
3	29-Sep	Divide&conquer/Recursive algorithms. Solve recurrences - guess&prove by induction		HW1 out	Chapter 4: 4.1 to 4.3
4	1-Oct	Recursion tree, Master Method	Asymptotics, recurrences		Chapter 4: 4-4 to 4-6
5	6-Oct	Randomized algorithms, Quicksort proof		HW1 due	Chapter 5, 7
6	8-Oct	Closest pair of points, randomized order statistics, deterministic median	Probability review	HW2 out	Chapter 9, 33.4
7	13-Oct	Heaps and Heapsort.			Chapter 6
8	15-Oct	sorting lower bound, counting sort, radix sort	radix sort, stable sort, review lower bounds	HW2 due	Chapter 8
9	20-Oct	Hashing - analysis of chaining and open addressing		HW3 out	Chapter 11: 11.1 - 11.4
10	22-Oct	Perfect hashing. Bloom filter	Hashing review		Chapter 11: 11.5
11	27-Oct	Binary search trees, skip list		HW3 due	Chapter 12
	29-Oct	Midterm	Midterm review (after midterm)		
12	3-Nov	Greedy algorithms - activity scheduling, hw scheduling, Huffman encoding		HW4 out	Chapter 16: 16.1-16.3
13	5-Nov	Intro to graphs: DFS/BFS, properties of DFS, topological sort	Use of binary search trees, examples of simple graph problems		Chapter 22: 22.1-22.4

14	10-Nov	MST, Prim		HW4 due	Chapter 23
15	12-Nov	MST, Kruskal, Union-find	MST-related problems	HW5 out	Chapter 23
16	17-Nov	Dynamic Programming - simple example, LCS			Chapter 15: 15.1-15.4
17	19-Nov	Matrix chain multiplication, Knapsack	Dynamic programming problems	HW5 due HW6 out	Chapter 15: 15.1-15.4
	24-Nov	Thanksgiving			
	26-Nov	Thanksgiving			
18	1-Dec	Bellman-Ford, Floyd-Warshall			Chapter 24,25
19	3-Dec	Dijkstra's shortest paths algorithm. Review.	Review.	HW6 due	Chapter 24,25