

Class schedule

Week 1	Simple Sorting Algorithms, maintain a sorted list
Week 2	Divide and conquer: mergesort and quicksort
Week 3	Heap and Heapsort, lower bounds on comparison sort
Week 4	Count sort and Radix sort
Week 5	Growth functions, asymptotics, recurrence
Week 6	Minimums, maximums, Median Finding, Analysis, randomized algorithm
TBD	Project 1 class presentation (5min/team)
Week 7	Greedy algorithms, Huffman codes
Week 8	Dynamic Programming, scheduling problem
Week 9	Longest Common Subsequence, matrix multiplication
TBD	Midterm Exam (90mins)
Week 10	Graph Algorithms: BFS, DFS
Week 11	Topological sort and Strongly Connected Component, Minimum Spanning Trees
Week 12	Single-source Shortest Path, Bellman-Ford, Dijkstra Algs.
Week 13	Multi-source Shortest Path, Floyd-Warshall Alg.
Week 14	Network Flow & Bipartite Matching
TBD	Projects 2/3 class Presentation (5 mins per team)
Week 15	NP-completeness
Week of Dec 8	Final Exam (90 mins) date/time determined by the university