

CS 38100, Fall 2016

Tentative Class Schedule

August

Day	Topic	Comments	Handouts
NOTE:	Schedule of topics is only approximate.	Expect changes as the course progresses.	Actual due-dates will be on the assignments.
22nd, Mon	Course organization and goals, big-Oh, etc.		
24th, Wed	functions of n ; mergesort	Read: CLRS chaps 1-3	
26th, Fri	maximum-subarray problem	Read: CLRS chap 4	
29th, Mon	multiply two n -bit numbers, master thm.		
31st, Wed	proofs of solutions for recurrences		Asg. 1 now available, due Sept. 8 at 11:59pm

September

Day	Topic	Comments	Handouts
2nd, Fri	selection algorithm	Read: CLRS, chap 9	
5th, Mon	Labor Day		
7th, Wed	analysis of selection algorithm	Asg. 1 due Sept. 8 at 11:59pm	
9th, Fri	celebrity problem		Asg. 2 now available, due Sept. 15 at 11:59pm
12th, Mon	red-black trees	Read: CLRS, chaps 13, 14	
14th, Wed	red-black trees	Asg. 2 due Sept. 15 at 11:59pm	
16th, Fri	augmented red-black trees		Asg. 3 now available, due Sept. 22 at 11:59pm
19th, Mon	rod cutting	Read: CLRS, chap 15	
21st, Wed	longest common subsequence	Asg. 3 due Sept. 22 at 11:59pm	
	LCS, matrix chain		

23rd, Fri	product		
26th, Mon	matrix chain product		Asg. 4 now available, due Oct. 2 at 11:59pm
28th, Wed	greedy algorithms	Read: CLRS, chap 16	
30th, Fri	Huffman code	Asg. 4 due Oct. 2 at 11:59pm	

October

Day	Topic	Comments	Handouts
3rd, Mon	Huffman code; disjoint sets	Read: CLRS, sections 21.1-21.3	
5th, Wed	disjoint sets		
7th, Fri	depth first search, topological sort	Read: CLRS, chap. 22	
10th, Mon	Octoberbreak		
12th, Wed	strongly connected components		
12th, Wed	Midterm Exam	6:30-7:30pm in FRNY G140	closed book, closed notes
14th, Fri	shortest paths: Bellman-Ford	Read: CLRS, chap. 24	
17th, Mon	Dijkstra's algorithm, Floyd-Warshall	Read: CLRS, section 25.2	
19th, Wed	F-W, max flow	Read: CLRS, sections 26.1-26.3	
21st, Fri	Hand back midterm exam		
24th, Mon	Max flow		
26th, Wed	max flow-min cut		Asg. 5 now available, due Oct. 30 at 11:59pm
28th, Fri	max flow: Edmonds-Karp alg.		
31st, Mon	maximum bipartite matching	Read: CLRS, section 26.3	

November

Day	Topic	Comments	Handouts
2nd, Wed	closest pair	Read: CLRS, section 33.4	Asg. 6 now available, due Nov. 8 at 11:59pm
4th, Fri	convex hull	Read: CLRS, section 33.3	

7th, Mon	decision trees and lower bound for sorting	Read: CLRS, section 8.1	
9th, Wed	alg. comp. trees and lower bound for Emst		Asg. 7 now available, due Nov. 15 at 11:59pm
11th, Fri	hard problems; P vs. NP		
14th, Mon	NP-complete, 3-CNF-satisf.;	Read: CLRS, chap. 34	
16th, Wed	reduction to CLIQUE		Asg. 8 now available, due Nov. 27 at 11:59pm;
18th, Fri	reduction: CLIQUE to VC		
21st, Mon	approx alg for vertex cover	Read: CLRS, chap. 35	
23rd, Wed	Thanksgiving Break		
25th, Fri	Thanksgiving Break		
28th, Mon	approx alg for bin packing		
30th, Wed	approx alg for TSP		

December

Day	Activity	Time	Location
2nd, Fri	second approx alg for TSP	to be filled in	
5th, Mon	to be filled in		
7th, Wed	to be filled in		
9th, Fri	to be filled in		
TBA, TBA	Final exam	time TBA	in room TBA