Tentative schedule

lecture	date	topic	readings	homeworks
01	27/Jan/14	Course intro. Analysis of algorithms: Insertion Sort	ch 1, 2.1, 2.2	
02	29/Jan/14	Growth of functions. Asymptotic notation	ch 3	HW1 out
03	03/Feb/14	Merge Sort. Intro to divide and conquer	ch 2.3	
04	05/Feb/14	Recurrences: iterative method, tree expansion	ch 4.4	
05	10/Feb/14	Recurrences: substitution method, master method	ch 4.3, 4.4, 4.5, 4.6	
06	12/Feb/14	Divide and conquer: binary search, fast exponentiation, integer multiplication, Strassen's algorithm for matrix multiplication	ch 2.3, 4.1, 4.2	HW1 due HW2 out
07	17/Feb/14	Divide and conquer: Strassen (cont.), closest pair of points	ch 33.4	
08	19/Feb/14	Quicksort: regular and randomized version. Lower bounds for sorting	ch 7, ch 8.1	
09	24/Feb/14	Greedy algorithms: activity selection	ch 16.1, 16.2	HW2 due HW3 out
10	26/Feb/14	Greedy algorithms	ch 16.3	
11	03/Mar/14	Midterm 1		
12	05/Mar/14	Dynamic programming	ch 15.3, 15.4	
13	10/Mar/14	Dynamic programming: LCS	ch 15.3, 15.4	HW3 due HW4 out
14	12/Mar/14	Amortized analysis	ch 17	
15	17/Mar/14	Amortized analysis	ch 17	
16	19/Mar/14	Data structures for disjoint sets (Union-Find)	ch 21.1, 21.2, 21.3	HW4 due HW5 out
17	02/Apr/14	Graphs: basics BFS	ch 22.1, 22.2	
18	07/Apr/14	DFS. Connected components. Topological sort	ch 22.3, 22.4	
19	09/Apr/14	Midterm 2		HW5 due HW6 out
20	14/Apr/14	MST: properties, generic algorithm	ch 23, 23.1	
21	16/Apr/14	MST: Prim and Kruskal	ch 23.2	
22	21/Apr/14	NP-Completeness	ch 34	
23	23/Apr/14	NP-Completeness	ch 34	HW6 due HW7 out

24	28/Apr/14	NP-Completeness	ch 34	
25	30/Apr/14	Approximation algorithms	ch 35	
26	05/May/14	Approximation algorithms	ch 35	HW7 due
27	07/May/14	Randomized search algorithms: local search and genetic algorithms		
28	12/May/14	Randomized search algorithms: local search and genetic algorithms		