

Week	Date	Day	Topic		Homework
1	1/10/2017	Tue	Organizational Items Five Representative Problems	KT 1.2	
	1/12/2017	Thu	Mathematical Induction Algorithm Efficiency	KT 2.1, 2.2	PS1 Out
2	1/17/2017	Tue	Asymptotic Order of Growth	KT 2.2, 2.4	PA1 out
	1/19/2017	Thu	Algorithms in Common Efficiency Classes Arrays, Linked Lists	KT 2.4, 2.5	
3	1/24/2017	Tue	Priority Queues, Graphs	KT 2.5, 3.1 DPV 3.1	
	1/26/2017	Thu	Graphs; Breadth First Search	KT 3.2, 3.3	PS1 Due/PS2 Out
4	1/31/2017	Tue	Depth First Search; Entry and Exit Times; Parentheses Theorem	DPV 3.2, 3.3 KT 3.2, 3.3	
	2/2/2017	Thu	Post Ordering, Edge Types Cycles, Topological Sort	DPV 3.2, 3.3 KT 3.6	
5	2/7/2017	Tue	Connectivity & Strong Connectivity , Computing Strongly Connected Components	DPV 3.4 KT 3.5, KT 3.6	PA1 Due/PA2 Out
	2/9/2017	Thu	Greedy Algorithms: Scheduling	KT 4.1	
	2/13/2017	Mon	non-lecture day		PS2 Due/PS3 Out
6	2/14/2017	Tue	Greedy Algorithms: Shortest paths	KT 4.4	
	2/16/2017	Thu	Greedy Algorithms: Minimum spanning trees	KT 4.5	
7	2/21/2017	Tue	Kruskal's algorithm implementation Clustering	KT 4.6, 4.7	
	2/23/2017	Thu	Divide-and-Conquer: Merge Sort Solving Recurrence Relations	KT 5.1, 5.2	
	2/27/2017	Mon	non-lecture day		PS3 Due/PS4 Out
8	2/28/2017	Tue	Midterm Exam		
	3/2/2017	Thu	Master Method Counting Inversions	KT 5.3	PA2 Due/PA3 Out
9	3/7/2017	Tue	SPRING BREAK		
	3/9/2017	Thu			
10	3/14/2017	Tue	Pi Day Blizzaard / Classes Canceled		
	3/16/2017	Thu	Finding closest pair of points Fast Integer & Matrix Multiplication	KT 5.4, 5.5	
	3/20/2017	Mon	non-lecture day		PS4 Due/PS5 Out
11	3/21/2017	Tue	Dynamic programming Weighted interval scheduling	KT 6.1, 6.2	
	3/23/2017	Thu	Shortest paths with negative weights	KT 6.8	PA3 Due/PA4 Out
12	3/28/2017	Tue	Knapsack Problem	KT 6.4, 6.7	
	3/30/2017	Thu	Network Flows Min-Cut, Max-Flow	KT 7.1, 7.2	
	4/3/2017	Mon	non-lecture day		PS5 Due/PS6 Out
13	4/4/2017	Tue	Residual Graphs, Ford Fulkerson Algorithm	KT 7.1, 7.2	
	4/6/2017	Thu	Ford Fulkerson Algorithm, Bipartite matching	KT 7.5, 7.10	
14	4/11/2017	Tue	Polynomial Reductions Polynomial Certifiers	KT 8.1, 8.2, 8.3	
	4/13/2017	Thu	P, NP, and NP-completeness	KT 8.3, 8.4	
	4/18/2017	Tue	due date shifted to 04/18 due to holiday		PA4 Due
15	4/18/2017	Tue	NP-completeness reductions	KT 8.4	PS6 Due
		Fri	Final Exam: Apr 21, 3:30-5:30pm, Hurtig Hall 129		