		Topic	Reading	Handouts	Session 1	Session 2	Tutorials are Thursday		
07-Sep		Admin & Intro, Exponentiation and Factoring	DPV Chapter 0 , 1-1.2	Course Info sheet; Lecture Notes 1	Lecture 1				
10-Sep		Recurrences; Fast multiplication, Sorting/Selecti	DPV Sections 2.1-2.5	Lecture Notes 2	Lecture 2				
12-Sep	Brudno	Divide and Conquer -- Matrix multiplication, Co	Lecture notes on Convex Hull; only D&C, up to Quic	Lecture Notes 3	Lecture 3	Lectures 1-3	Tutorial -- DC		
14-Sep		Intro to Greedy	KT 4.1		Lecture 4				Intro & DC
17-Sep		Greedy Algorithms for Scheduling	KT 4.2		Lecture 5				
19-Sep	Brudno	Greedy Compression: Huffman codes	DPV 5.2	Proof of Optimality of Huffman Codes	Lecture 6	Lecture 4-6	Tutorial -- Greedy		
21-Sep		More Compression: Kolmogorov Complexity	Kolmogorov Complexity (see Definition and proof of uncomputability)		Lecture 7			HW1 out	
24-Sep		Basics of Complexity: SAT, Reductions (longest p	TODO		Lecture 8				
26-Sep	Borodin	Greedy Algorithms for MST: Prim's	DPV 5-5.1		Lecture 9	Lecture 7-9	Tutorial -- More greedy; reductions		
28-Sep		Building up solutions: Dijkstra	4-4.5		Lecture 10				Greedy
01-Oct		Bellman Ford least cost paths	DPV 4.6		Lecture 11				
03-Oct	Brudno	All pairs least cost paths	DPV 6.6		Lecture 12	Lecture 1 Lecture 11-12	Tutorial -- Greedy Graphs		
05-Oct	HW1 Due	Intro to Dynamic Programming; Memoizing Sub	Intro to DP, Memoization, Fibonacci		Lecture 13			HW1 Due	Graphs
08-Oct		THANKSGIVING			NO CLASS				
10-Oct	Brudno	Weighted Interval Scheduling; Iterated Matrix p	Weighted Interval Scheduling; DPV 6.5		Lecture 14	Lecture 13 & 14	Tutorial -- Graphs/DP		
12-Oct		Longest Increasing Subsequence/ Longest Comr	DPV 4.7; DPV 6.1; DPV 6.2; also see LIS in n log n website		Lecture 15				
15-Oct		Edit Distance; Longest Common Subsequence	DPV 6.3 and/or KT 6.6	LIS in n log n	Lecture 16			HW1 returned	
17-Oct	Borodin	Edit Distance in Linear Space via D&C	KT 6.7 or Hirschberg description in website	Hirscberg's Algorithm (up to heuristic Local Alig	Lecture 17	Lecture 15-17	Tutorial - HW 1 Review		
19-Oct	Midterm 1	Introduction to network flow	KT 7.1	DPV 7.2 covers same material as KT 7.1-3, but	Lecture 18		MIDTERM 19 OCT (Lectures 1-14)	HW2 out	
22-Oct		Push/relabel algorithm; Max Flow/Min Cut Dual	KT 7.2, 7.3	treatment in DPV is dense, so read KT for	Lecture 19				DP
24-Oct	Brudno	Examples of Flow Reductions	DPV 7.3; KT 7.7, 7.10	more details	Lecture 20	Lecture 18-20	Tutorial -- DP		
26-Oct		Flow->LP reduction; Intro to LP	DPV 7.1, 7.4		Lecture 21				
29-Oct		Simplex Algrithm	DPV 7.6		Lecture 22				
31-Oct	Brudno	Examples of LP Problems	DPV 7.7; https://neos-guide.org/content/diet-problem		Lecture 23	Lecture 21-23	Tutorial -- DP/Flow		
02-Nov	HW2 due	NP-Completeness (intro)	DPV 8.1, 8.2		Lecture 24			HW 2 due	Flow
05-Nov									
07-Nov		READING WEEK							
09-Nov									
12-Nov		More NP-Completeness			Lecture 25				
14-Nov	Borodin	Reductions	DPV 8.3		Lecture 26	Lecture 24-26	Tutorial -- Flow		
16-Nov		More reductions			Lecture 27				
19-Nov		Exhaustive Search	DPV 9.1		Lecture 28			HW2 Returned	
21-Nov	Borodin	Approximation	DPV 9.2		Lecture 29	Lectures 27-29	Tutorial -- HW 2 Review		LP
23-Nov	MIDTERM 2	More Approximation	contd		Lecture 30		MIDTERM 23 NOV (Lectures 15-26)	HW3 out	
26-Nov		Local Search	DPV 9.3	\	Lecture 31				
28-Nov	Borodin	Randomization			Lecture 32	Lecture 30-32	Tutorial -- LP/NP		
30-Nov		TBA			Lecture 33				
03-Dec		TBA			Lecture 34				NP + Approx
05-Dec	Borodin	Wrap-up			Lecture 35	Lecture 33-35	Tutorial -- NP/Approx		
06-Dec	NO CLASS/HW3 due							HW3 due	
								HW 3 returned -- before final	