Day #	Date	Topic	Group timeline	Deliverables
1	W 1/25	Introduction to Linear Programming, Work on example	Form groups	Form groups with 3-4 students/group
2	M 1/30	Standard form, canonical form, matrix notation	Form groups	
3	W 2/1	Geometry of Linear Programming, Extremal points	Problem #1	Problem #1 sent to groups
4	M 2/6	Extremal point theorem, Basic feasible solutions		
5	W 2/8	Worked examples (formulating the problems)		
	M 2/13	(no classes)		
6	W 2/15	Group presentations (Problem #1 setup)	Presentations	Mathematical formulation of Problem #1 into canonical form, initial draft of typed report is due
	M 2/20	Presidents' day (no classes)		
7	T 2/21	Simplex method I: intuitive approach		
8	W 2/22	Simplex method II: algorithm		
9	M 2/27	Simplex method (example), Degeneracy and cycling		
10	W 3/1	Artificial variables and two-phase method		
11	M 3/6	Two-phase method complete example		
12	W 3/8	Review of Two-Phase Method		Solution to Problem #1 using simplex method, with/without software, full typed report is due
13	M 3/13	Group presentations (Problem #1 solution)	Presentations	
14	W 3/15	Dual linear program and duality theorem	Problem #2	
15	M 3/20	Computational relations between primal and dual		
16	W 3/22	Dual simplex method		
17	M 3/27			
18	W 3/29	Group presentations (Problem #2)	Presentations	Solution to Problem #2 using simplex method, dual problem analysis, with/without software, full typed report is due
19	M 4/3	(class cancelled)		
		Spring Break (no classes)		
20	M 4/17	Positive semidefinite matrices, Sylvester's criterion		
21	W 4/19	Spectrahedra and equivalent formulations		
22	M 4/24	Spectrahedral shadows, convex semialgebraic sets		
23	W 4/26	Semidefinite programs		
24	M 5/1	Separating data points using planes and quadrics		Solution to Problem #3 using semidefinite programming, with/without software, full typed report is due
25	W 5/3	Sums of squares and nonnegative polynomials		
26	M 5/8	Duality in Semidefinite Programming		
27	W 5/10	Semidefinite program (example)		
28	M 5/15	Group presentations (Problem #3)	Presentations	