

Date	Topic	Instructor	
1/17/2023	Intro & Admin. Linear-time Selection (randomized and deterministic); recursion trees	E	
1/19/2023	Concrete models and tight upper/lower bounds	E	HW1
1/24/2023	Amortized Analysis	D	
1/26/2023	Splay Trees	D	HW2
1/31/2023	Range Query Data Structure	E	
2/2/2023	Hashing I: Universal and Perfect Hashing	E	HW3 (oral)
2/7/2023	Hashing II: Streaming Algorithms	E	
2/9/2023	Hashing III: Fingerprinting and other applications	D	(presentations)
2/14/2023	Midterm I		
2/16/2023	Dynamic Programming I	D	HW4
2/21/2023	Dynamic Programming II: graph algorithms, including shortest paths (Bellman-Ford) and all-pairs SP	D	
2/23/2023	Network Flows I: Flows and Matchings	E	HW5
2/28/2023	Network Flows II	E	
3/2/2023	Network Flow III	E	
3/7/2023	Spring break		
3/9/2023	Spring break		
3/14/2023	Zero Sum Games	E	HW6 (oral)
3/16/2023	Linear Programming I	D	
3/21/2023	Linear Programming II	D	
3/23/2023	Mechanism Design	E	(presentations)
3/28/2023	Midterm II		
3/30/2023	Approximation Algorithms	E	HW7
4/4/2023	Online Algorithms	E	
4/6/2023	Multiplicative Weights Algorithm	D	HW8
4/11/2023	Computational Geometry I: Geometric Primitives and Convex Hull	D	
4/13/2023	Spring Carnival		
4/18/2023	Computational Geometry II: Sweepline, Sweepangle, and SegTrees	D	HW9 (oral)
4/20/2023	Computational Geometry III: Closest Pair and Smallest Enclosing Circle	D	
4/25/2023	Fast Fourier Transform, and Applications	D	
4/27/2023	The Algorithmic Magic of Polynomials	E	(presentations)
(Finals week)			