CS 435
Algorithms

Schedule

Theme	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Foundations and Analysis	Introduction and Overview	Stacks, Queues, Vectors, Lists, and Sequences	Trees and Amortized Analysis	Priority Queues, Selection-sort, Insertion-sort, and Heap-sort	Divide-and-Conquer Paradigm: Merge Sort and Quick Sort	Lower Bound on Sorting by Key Comparison and Linear Time Sorting Algorithms
	Algorithm Analysis	Reading & Homework	Reading & Homework	Reading & Homework	Reading & Homework	Reading & Homework
Sorting and Searching	Standard Bucket Sort, Unordered Dictionaries, and Ordered Lookup Tables	Ordered Dictionaries: Binary Search Trees, AVL, and 2-4 Trees	Red-Black Trees	Skip Lists and Quick Selection	Review for Exam	Mid-term Exam
	Reading & Homework	Reading & Homework	Reading & Homework	Reading & Homework	Study	
Techniques	Greedy Algorithms and Dynamic Programming	Dynamic Programming Lab	Graphs & Graph Traversal (DFS & BFS)	Template Methods, Weighted Graphs, & Shortest Paths	Minimum Spanning Trees	P vs. NP Is P = NP?
	Reading & Homework	Lab, Reading & Homework	Reading & Homework	Reading & Homework	Reading & Homework	Reading & Homework
Computability	NP-Completeness and Approximation Algorithms	Directed Graphs	Review for Exam	Final Exam		
	Reading & Homework	Reading & Homework	Study			