

Csci 335 Schedule

Required Reading

The following table outlines the topics that we will cover during the semester. You are expected to read the material in the given chapter before the class in which it is covered. There is more material in the chapters than we will cover in class. The list below summarizes the parts of the chapters that will, for certain, be covered in class. If time permits, I may include other material.

Topic	Weeks
Chapter 1. Introduction (Review)	1
Introduction	
C++ review: various topics	
Chapter 2. Algorithm Analysis	2
Theoretical Background, Modeling	
Running Time Calculations	
Chapter 4. Trees	3-5
Tree fundamentals	
AVL Trees and splay trees	
B-Trees	
Chapter 5. Hashing	6-7
Hashing Basics	
Collision Resolution and Open Addressing	
Rehashing	
Perfect Hashing	
Chapter 6. Priority Queues (Heaps)	8-9
Heap Basics	
Binary Heaps	
Chapter 7. Sorting	10-11
Sorting (including Shell Sort)	
Heapsort	
Quicksort	
Lower Bound for Sorting	
Chapter 8. Disjoint Set ADT	12
Equivalences and the Dynamic Equivalence Problem	
Basic Data Structure	
Smart Union and Path Compression Algorithms	
Chapter 9. Graph Algorithms	13-14
Graph Algorithms	
Shortest path algorithms	
P and NP	