



## Csci 335 Syllabus

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