

Ph.D. Qualifier Information

Algorithms Study Guide

The qualifier exam covers CS325 material and the prerequisite material for CS325.

Suggested Text: Introduction to Algorithms, 3rd Edition, Cormen et. al., the MIT Press

Foundations

Chapters 1-4

Sorting and Order Statistics

Sorting: Insertion sort, Merge sort, Quick sort

Order statistics: Chapter 9

Data structures

Chapters 12-14

Advanced design and analysis techniques

Chapters 15-17

Graph Algorithms

Chapters 22-26

Selected topics

Linear programming

NP Completeness

Poly-time reduction, and well-known NP-complete problems

Submitted by Professors McMillin, Cheng and Wilkerson, November 2010