

CSC 340 ALGORITHMS MIDTERM STUDY GUIDE

PROFESSOR GODFREY MUGANDA

In addition to the concepts on the midterm study guide, be prepared to answer questions about the following concepts:

Recurrence relations (be able to solve simple recurrence relations like the ones for Binary Search and Mergesort), the concept of a logarithm, divide and conquer algorithms including mergesort and quicksort; the partition procedure in quicksort, the merge procedure in mergesort.

Algorithm design by induction, dynamic programming, Floyd's shortest paths algorithm, implementation of dynamic programming such as what we looked at in class for combinations (Pascal's triangle).

Be able to use the kind of reasoning needed to create recurrence relations for dynamic programming algorithms, understand matrix multiplication.

Understand the definitions of Big O , Big Ω and Big Θ .