CSE 5311: DESIGN AND ANALYSIS ALGORITHMS
Fall 2009

Tu/Th 3:30PM – 4:50PM (NH 229)

Course Syllabus:

- Review of Asymptotic Analysis and Growth of Functions; and Trees and Heaps

- Recurrences and Sorting Algorithms

- Graph Algorithms and Maximum Flow Networks

- Greedy Algorithms and Dynamic Programming, and Amortized Analysis

- Algorithms for String Matching and Computational Geometry

- Matrix Operations and Linear Programming

- NP Completeness and Approximation Algorithms

- (Time Permitting) Special Topics: Applications of Algorithms in

    o   Databases

    o   Information Retrieval and Web Searching

    o   Data Mining and High-Dimensional Computational Geometry