CS47B_F'08 Outcomes List – Dan Garcia

Based upon the 2006 expanded description for the self-paced course CS47B, our desired course outcomes are as follows.

1) Students will understand and be able to successfully use Iterators (in particular instances of classes implementing the java.util.Enumeration interface) for trees in a working program.

2) Students will analyze and devise hash functions applied to data.

3) Students will successfully work with code to manage a binary heap. They will be able to analyze, invent and modify heap management code.

4) Students will be able to choose from among the common ways to represent a graph (adjacency lists or adjacency matrix) for a particular problem, and discuss running times in “Big-Oh” notation for an algorithm run on the particular data structure.

5) Students will be able to choose from among several data structures (sorted arrays, balanced binary search trees, hash tables, heaps, and graphs) for a particular implementation based on space-time requirements and specify pseudo-code for implementation.

6) Students will understand graphs with edge weights, and be able to implement standard graph algorithms.

7) Students will be able to solve a fairly complex programming problem involving space-time tradeoffs, storing something other than strings in a hash table.