

CSE134: Data Structures and Introduction to Algorithms Spring 2006

Lectures: TTh 9:30-10:45am, CUE, Room 122

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Textbook: Goodrich and Tamassia. *Data Structures and Algorithms in Java, 4th edition*. John Wiley and Sons, Inc. Textbook website: <http://java.datastructures.net>

Prerequisites: CSE 133 or CSE 124. Students should have at least one semester of programming experience with either Java or C++. Students with less Java experience are expected to appropriately familiarize themselves with Java during the first two weeks.

Overview: This course deals with the fundamentals of organizing and manipulating computer data efficiently using clean conceptual models based on the object-oriented paradigm. You will study many of the important conceptual data types, their realization through implementation, and analysis of their efficiency. Implementations will be carried out in the Java programming language, but the principles are generally applicable to most modern programming environments.

Tentative list of topics:

- Arrays and linked lists
- Recursion
- Basics of algorithm analysis
- Stacks and queues
- Lists and iterators
- Trees
- Priority queues
- Maps and dictionaries
- Search trees
- Text processing
- Graphs
- Memory management

Grading policy: Grading will be based on homework assignments (30%), programming projects (30%), mid-term (15%) and final exam (25%).

WebCT: We have a WebCT Vista site for the class. Check it regularly for class materials, grades, problem clarifications, changes in class schedule, and other class announcements.

Academic honesty: You are expected to adhere to the highest standards of academic honesty. All submitted solutions must be your own work. For homework assignments and programming projects you may discuss ideas and concepts with other people, but *must not share written solutions or code*. Use of published materials is allowed, but the sources should be explicitly stated in your solutions. Violations will be reviewed and sanctioned according to the University Policy on Academic Integrity.

Students with disabilities: If you have a documented disability for which you are or may be requesting an accommodation, you are encouraged to contact the instructor and the Center for Students with Disabilities or the University Program for College Students with Learning Disabilities as soon as possible to better ensure that such accommodations are implemented in a timely fashion.