CSE 373 Spring 2006

Data Structures and Algorithms

Where and When
Lectures: MWF 11:30-12:20 JHN 075

Instructor
Jean-Loup Baer, 474 Allen Center, 685-1376, baer@cs
Office hours: Mo 1:30 - 2:30, Th 11:00 - 12:00 or by appointment

Teaching Assistants
Gary Yngve gyngve@cs
Office hours: Allen Center TBD
Jean Yanni Wu jeaneis@cs
Office hours: Allen Center TBD

Course Goals and Material to be covered
Introduction to many of the basic data structures used in computer software, that is: (i) Understand the data structures, (ii) Analyze the algorithms that use them, and (iii) Know when to apply them.

Specific topics:

- Introduction to Algorithm Analysis
- Lists, Stacks, Queues (very fast!)
- Trees
- Heaps and Priority Queues
- Balanced search trees
- Hashing
- Sorting
- Disjoint Sets
- Graph Algorithms

Text:
Michael Goodrich and Roberto Tamassia *Data Structures & Algorithms in Java*, 4th Edition, 2006, Wiley

Assignments:
There will be an (almost) weekly assignment, either exercises or programming "projects" or both. Details on the format for the exercises and turn-in for the projects will be given at the time of the assignment.

Assignments will be due Wednesdays at 11:00 am for the electronic turnin and at the beginning of class for the paper problems.

If there is "programming" in the paper problems, algorithms should be written in pseudo-code (like in the lectures).

For the programming projects, you can use either your own computer or use the Math Sciences Computing Center
http://www.ms.washington.edu/.
Programming will be done in Java 5.0 also known as Java 1.5. The set up is the same as for CSE142 and CSE143. If you are computing at home see, for example,:
http://www.cs.washington.edu/education/courses/cse14x/06wi/computing_at_home.html

If you are computing in the MSCC lab, they have Java 5 (aka 1.5), Eclipse, DrJava, and TextPad ready to use.

Late assignments will not be accepted unless there is prior approval.

Policy on Collaboration

You are to complete assignments individually. You may discuss assignments with other members of the class. However, the code you write and the paper solutions that you turn in must entirely be your own. You should follow Gilligan's Island rule, that is:

- You may discuss problems with your classmates to your heart's content.
- After you have solved a problem, discard all written notes about the solution.
- Go watch TV for a half- hour (or more). Preferably Gilligan's Island.
- Then write your solution.

Exams:
There will be 2 midterms and 1 final.

Grading (this is still tentative but will most likely stand as is):

- Assignments (Exercises and programming projects) : 50%
- Midterm 1 15% Tentative date April 21
- Midterm 2 15% Tentative date May 17
- Final 20% Definite date June 7 2:30 - 4:20

Posting of lectures and e-mail
Checking the CSE 373 Web home page frequently is required.

Lecture slides and the text of the Assignments will be posted on the Web.

Please take advantage of e-mail and of the discussion board (see the link on the home page). Check your e-mail often since announcements, for example corrections of clarifications for assignments, maybe be done this way. The TA's and instructor will forward questions (made anonymous) and answers to the whole class if appropriate.