CSCB63

Design and Analysis of Data Structures

Topics

- Worst Case Complexity
- Balanced Search Trees
- Graphs and Graph Traversals
- Priority Queues and Heaps
- Disjoint Sets
- Amortized Complexity
- Average Case Analysis
- Hashing

Term Work

Assignments

- 4 each worth 5% for a total of 20%
- Basic understanding questions
- More challenging questions
- Only some of the questions will be graded
- Applied question (programming in C)

Term tests (3)

- 60min each held in Wednesday lecture
- Worth 15%, 15%, 15%
- Test 1 covers A1, Test 2 covers A2, Test 3 covers A3

Final Exam

- worth 35%

Textbook Options

Algorithm Design: Foundations, Analysis, and Internet Examples.

Michael Goodrich and Roberto Tamassia, John Wiley & Sons (2002), ISBN:0471383651.

Introduction to Algorithms (2nd edition).

Cormen, Leiserson, Rivest, Stein McGraw-Hill (2001),

ISBN:0070131511.

Free online access for U of T students:

http://main.library.utoronto.ca/eir/resources.cfm

Course Design

- Each week there may be *pre-lecture preparation* and *pre-lecture exercises*.
- In lectures we will have a mixture of *slides* and *practice*.
- Completing the *pre-lecture work* will maximize your learning in this course.
- *It will enable you to make the best use of lecture time.*

Resources

Communication

- Piazza: you will get an invite - all updates posted here.
- Website: mathlab.utsc.utoronto.ca/bretscher/b63
- Office Hours: Anna, TAs - on calendar

- Calendar: google calendar has all dates
- U of T email: I will send you important updates to your email.