CSC B63   **Data Structure & Algorithm Analysis**   *Summer 2011*
Course Information Sheet
Wael Aboulsaadat

Overview
Welcome to CSCB63. This course consists of three lecture hours and one hour of tutorial each week; assignments; a midterm; and an exam.

Topics
Design, analysis, implementation and comparison of efficient data structures for common abstract data types. Priority queues: heaps and mergeable heaps. Dictionaries: balanced binary search trees, B-trees, hashing. Amortization: data structures for managing dynamic tables and disjoint sets. Data structures for representing graphs. Graph searches.

Course Schedule
Lecture: Wednesday 12:10-3:00PM (IC212)
Tutorials: Tuesday 14:00-15:00(IC 212) & Tuesday 15:00-16:00(IC 120) [*no tutorial first week*]

Staff Information
Instructor: Wael Aboulsaadat   Email: wael@cs.toronto.edu   Office: PO103, Office #107
Office hours: Wednesday, 3-4pm & by appointment
TA: Joe Bettridge

Course Prerequisites
Prerequisite: CSCB07H3 & CSCB36H3 & STAB52H3 & [CGPA 2.5 or enrolment in a CSC subject POSt] Exclusion: CSC263H, CSC265H

Marking

Item	Weight
Assignment 1	10 %
Midterm (June 15th)	20 %
Assignment 2	15 %
Assignment 3	20 %
Final exam	35 %

Textbook
Data Structures and Algorithms in Java. By Michael T. Goodrich and Roberto Tamassia
Publisher: Wiley; 5th edition. ISBN-13: 978-0470383261. You are responsible for reading the relevant sections.

Course Website
The course web site will use the blackboard system at: http://portal.utoronto.ca. Important information and announcements will be posted there. You are responsible for checking the web page regularly (At least a few times a week). The bulletin board for this course is also accessed through the blackboard system. Your TA will be monitoring the bulletin board. There will be a 12 hour blackout prior to the due date whereby the TA will not answer your questions.

Lecture Notes
This course use hand written notes. You are responsible for taking your own notes during the lecture.

Assignments and Late Submissions
The due dates for each assignment will be as listed above. All files must be submitted electronically via blackboard. You have to use one of the following accepted formats: plain ASCII file, Postscript, or PDF. Penalties for late homework: 10% for each day (00:01a.m. counts as one day late and no more than 3 penalty days).

Remarking Requests
For all the assignments, and the midterm: once your assignments/midterm have been marked and distributed in class, you have ONE WEEK to submit a written remarking request (form online).

Topics

Topic *(subject to change)*	Reading *(from Goodrich & Tamassia)*
Asymptotic analysis	Chapter 4
Algorithm analysis	Chapter 4
Dictionaries & hash tables	Sections 9.1, 9.2, 9.5–9.5.1
Hash codes, stacks, queues	Chapter 5
Trees and traversals	Chapter 7
Priority queues	Sections 8.1–8.3
Binary search trees	Section 10.1
Balanced search trees	Section 10.4
Graphs	Sections 13.1–13.3
Weighted graphs	Sections 13.5.1, 13.6–13.6.1
Sorting algorithms	Sections 8.2.2, 8.3.5, & 11.1
Quicksort	Section 11.2
Disjoint Sets	Section 11.4
Sorting & selection	Section 11.3.1 & 11.5
Radix sort	Section 11.3.2
Splay trees	Section 10.3
Amortized analysis	
Randomized analysis	

Email
Do not expect the instructor to be always available by email. Responses may take 24 hours or more. If you are working on an assignment, try to ask any questions that you may have in advance during office hours (i.e., plan ahead). Questions emailed the night before an assignment is due may not receive a timely response. Email should be used only in cases of emergency, or when you have exhausted all other venues of investigation on your own. If you must communicate via email, please follow these rules: 1) use your UofT email address. 2) The Subject line must contain "cscb63". 3) Write short messages. 4) If you send a program and ask "what is wrong with it?" - do not expect a reply. 5) No attachments and no HTML.

Academic Offences
http://www.cs.toronto.edu/~fpitt/documents/plagiarism.html !