CSE 373 -- Data Structures and Algorithms

Syllabus -- Autumn 1999

Brad Chamberlain

Description: In this class we'll be studying a number of fundamental data structures and algorithms used in computer programming. An emphasis will be placed on data structures and algorithms that are of practical value, though more esoteric ones will also be considered. Students will analyze each concept covered in the course to understand its strengths and weaknesses, and to understand applications for which it would be appropriate. By the end of the course, students should have the skills necessary for selecting between existing data structures and algorithms, and for designing their own.

Text: Mark Allen Weiss' *Data Structures and Algorithm Analysis in C++ (second edition)*, Addison-Wesley (1999)

Staff (`cse373-staff@cs.washington.edu`)**:**

Brad Chamberlain, *instructor*	(`brad@cs.washington.edu`)	(**O:**W 2-3 *Sieg 226c*, **L:**Th 1-2)
A.J. Bernheim Brush, *TA*	(`ajb@cs.washington.edu`)	(**O:**T 10-11 *Sieg 226a*, **L:**Th 11-12
Sun Liang, *TA*	(`sunliang@cs.washington.edu`)	

Lecture: MWF 12:30-1:20 : MOR, room 220

Week at-a-glance:

	Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
9:30					
10:00		**Office Hours** (AJ)			
10:30		*Sieg 226a*			
11:00				**Lab Hours** (AJ)	
11:30				*MSCC*	
12:00					
12:30	**Lecture**		**Lecture**		**Lecture**
1:00	*MOR 220*		*MOR 220*	**Lab Hours** (Brad)	*MOR 220*
1:30				*MSCC*	
2:00			**Office Hours** (Brad)		
2:30			*Sieg 226c*		
2:00					

Computing Resouces:

MSCC PC Lab

Students' Personal Computers

Evaluation:

Written Assignments	25%
Programming Assignments	25%
Midterm	20%
Final Exam	30%

Important Dates:

Midterm	Wednesday, November 3rd
Veteran's Day	Thursday, November 11th
Thanksgiving	Thursday-Friday, November 25th-26th
Final Exam	Wednesday, December 15th 8:30-10:20am

Approximate Course Schedule:

week of ...	*topic*	*reading*
Sept 27	asymptotic analysis, recursion, background	(*Chapters 1-2*)
Oct 4	lists, stacks, queues	(*Chapter 3*)
Oct 11	trees	(*Chapter 4*)
Oct 18	hash tables	(*Chapter 5*)
Oct 25	heaps	(*Chapter 6*)
Nov 1	catch-up, midterm	
Nov 8	sorting	(*Chapter 7*)
Nov 15	disjoint sets	(*Chapter 8*)
Nov 22	graphs	(*Chapter 9*)
Nov 29	graphs	(*Chapter 9*)
Dec 6	wrap-up, miscellaneous	

Assignments:

- *Language:* All assignments must be done in C++ (there is some chance that C will also be accepted).

- *Schedule:* Written assignments will be handed out weekly and will be due one week later. Programming assignments will be handed out approximately every other week and will be due approximately two weeks later. All assignments will be due *at the beginning* of lecture. Assignments turned in at the end of lecture will be considered late.

- *Late Days:* You are allotted two late days for the quarter. Each late day gives you one extra class day to turn in assignments. Thus, if an assignment is due on Friday, you may use one late day to turn it in on Monday. Or you may use both of your late days and turn it in on Wednesday. Note that it is in your best interest to avoid using late days altogether so that you don't fall behind. Once you've used both late days, no other late assignments will be accepted. If you are unsure of how many late days you've used, check with the staff.

- *Collaboration:* Collaboration on assignments is permitted and encouraged provided that the following rules are followed:

    - Each student has spent at least 10 minutes working on each problem independently before collaborating with others.
    - Cooperation must be limited to group discussion and brainstorming. No written or electronic material may be exchanged or leave the brainstorming session.
    - After collaborating, each student must take a half-hour break from the problem. Watching some brainless TV is a recommended activity.
    - Each student must write up their own solution independently, using their own words to prove that they understand the problem on their own.

  Any deviation from these rules will be considered cheating. If you are uncertain as to what is or is not reasonable collaboration, please contact the instructor.

- *Cheating:* I consider cheating to be an insult to myself, to the TAs, and to your classmates. Cheating will not be tolerated and will result in university disciplinary action and a failing grade in the course. If you are having problems understanding or keeping up with the material, please contact me to discuss how we can fix the problem. Just don’t cheat.