CS 30, Winter 2008, Programming and Problem Solving using C

The purpose of the course is to teach computer programming and problem solving using the computer language C. The course also discusses the basic use of Unix. Although learning C requires learning a great number of exacting details, and you will not get your C programs working unless you learn those details, in the long run those details will have little value. Rather, what is of value is learning how to *think* like a programmer, how to *organize* your thoughts in a way that can be translated into a computer program, how to then *translate* those thoughts into a program, and finally how to *debug and verify* the correctness of your program . Those skills will be emphasized in this class - to a large extent, you will teach yourselves the details of the C programming language, and I will teach you how to think like a programmer.

The required book is C Programming: A Modern Approach, by K.N. King, published by Norton. Yes, you will need to have a copy or access to a copy.

I have not taught this course using this book before, so I can't be sure that we will keep to the planned schedule, and we will also use some programs and materials outside of those in the book, but I expect that the weekly lectures will roughly follow the schedule below.

Week 1: Introduction to the course and to Unix - The materials on Unix are on Matloff's tutorial on Unix (linked from the class webpage) and in the tutorial you will do for Homework 1 in the course (linked from the class webpage).

Week 2: Chapters 2 and 3, and parts of 6, 7

Week 3: Chapters 3, 4, 5

Week 4: Chapter 5, 6, 7

Week 5: Chapters 8, 9

Week 6: Chapter 9, 10

Week 7: Chapters 11, 12

Week 8: Chapters 13, 15

Week 9: Chapters 16, 17

Week 10: Slack in case we fall behind the lecture schedule, and Advanced Programs in case we don't.

Office hours will be posted shortly.

Course Instructor: Dan Gusfield

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Office: 2125 Kemper Hall

Office Hours: To be posted next week.

T.As: David Camp, T. Demir, P. Chowdhurry, An Chan

The first Midterm, in class, will be February 7. The second midterm will be scheduled later as the class progresses. Also, note the date of the final now - Weds. March 19, 8:00 - 10:00 am. No early or late exams can be given.

Grading: 40% Homeworks; 30% midterms (15% each midterm); 30% Final Exam.

Active classroom participation will be noted (as best I can learn your names) and can help in cases where your grade is near the dividing line between two grades.