

CMPS 10

Introduction to Computer Science

Winter 2008

This course is an introduction to the fundamental concepts, issues, and methods of computer science. Our unifying theme is the design, theory, implementation, and applications of algorithms. Topics include: correctness and efficiency of algorithms, hardware implementations of algorithms, machine and assembly languages, higher level programming languages, and the theoretical limits of computation. While there are no prerequisites, this is a computer *science* course, and not a computer *literacy* course. In other words, this is a challenging course which will cover some technical material and a fair amount of abstract mathematical content. Students interested in a more leisurely introduction to computers should consider taking CMPS 2 (Computer Literacy) or CMPE 3 (Personal Computers).

Time and Place: TTh 12:00 – 1:45 pm Media Theater M 110
Class Webpage: <http://www.soe.ucsc.edu/classes/cmcs010/Winter08/>
Webforum: <http://apps.soe.ucsc.edu/fora/viewforum.php?f=10>

Instructor: Patrick Tantalo (<http://www.soe.ucsc.edu/~ptantalo/>)
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Teaching Assistants:
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Keren Jin <kjin@soe.ucsc.edu>

Secondary Labs: The purpose of the secondary lab sections is for the TAs to provide help with homework, quiz preparation, and lab assignments, as well as to provide facilities for you to work on the Lab Assignments. Attendance at the secondary labs is entirely optional. The lab times posted in the schedule of classes will be subject to some modification. An official schedule of lab sections will be posted on the class webpage. Please refer that posting when you are looking for a lab to attend, not to the schedule of classes website.

Text: *An Invitation to Computer Science, Fourth Edition (C++ version)*, by G. Michael Schneider & Judith L. Gersting. Course Technology 2007. We will cover (roughly) chapters 1-6, and 8.

Evaluation: The work in this course will be weighted as follows:

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|-------------------------|------------|
| Written Homework | 5% |
| Lab Assignments | 30% |
| Quizzes | 30% |
| Final Exam | 35% |

Homework will consist of written assignments taken from the exercises at the end of each chapter. Homework will be graded only as to its completion, not its correctness. Specifically, one point will be awarded for each problem (or each part of a multi-part problem) which is seriously attempted. The main purpose of homework is to prepare students for quizzes and the final exam. Homework will be submitted at the beginning of class on the due date. **Lab Assignments** are designed to familiarize students with the UNIX operating system, compiling and running C++ programs, sorting algorithms and their asymptotic run times, assembly language programming, and programming in C++. These assignments will be turned

in electronically via the "*submit*" command which will be described in the first lab assignment. **Please do not attempt to turn in any lab or homework assignment by email. No credit will be given for such work.** Quizzes will be given in class starting **Thursday January 17** and every two weeks thereafter. Quizzes will be held during the last 20 minutes of the class period. A complete listing of all quiz dates, and solutions will be found on the class website. The **Final Exam** will be held on **Wednesday, March 19** from **8:00 to 11:00 am**. Please make arrangements to be available on that day.

The grading scale for the class will be approximately: A+::97%-100%, A::93%-96%, A-::90%-92%, B+::87%-89%, B::83%-86%, B-::80%-82%, C+::76%-79%, C::70%-75%, D::60%-69%, F::0%-59%. Letter grade boundaries may be lowered at my discretion in order to eliminate some borderline cases.

Getting a UCSC Computer Account:

It is a requirement of this course that each student have an active UCSC computer account. If your account is not already activated, go to the UCSC portal: <http://my.ucsc.edu>, and log in using the *User ID* and *Password* that were sent to you by the Registrar's Office, then click on the link labeled *Activate UCSC Account*. Attend one of our scheduled lab sessions to learn how to log on to your UCSC computer account once it has been activated.

Academic Honesty:

The Baskin School of Engineering has a zero tolerance policy towards any incident of academic dishonesty. If cheating occurs, consequences within the context of the course may range from getting zero on a particular assignment, to failing the course. In addition to these sanctions, every case of academic dishonesty is referred to the students' college Provost, who sets in motion an official disciplinary process. Cheating in any part of the course may lead to failing the course and suspension or dismissal from the university.

What is cheating? In short, it is presenting someone else's work as your own. Examples include (but are not limited to) copying another student's written homework assignment, program, quiz, or exam, allowing your own work to be copied, or in any way facilitating the cheating of others. Although you may discuss problems with fellow students, your collaboration must be at the level of *ideas* only. Legitimate collaboration ends when you "lend", "borrow", or "trade" *written solutions* to problems, or in any way share in the act of *writing* your answers. You may freely give and receive help with the computer facilities, editors, the UNIX operating system, and the proper use and syntax of the C++ programming language; but you may not copy, paste, email, or in any way share any file which is submitted as part of a lab assignment. In particular you may not share *source code*. If you do collaborate (legitimately) or receive any form of help from anyone, you must credit them by placing their name(s) at the beginning of your assignment.

Please go to http://www.ucsc.edu/academics/academic_integrity/ to see the full text of the University's policy on Academic Integrity.