

# CMPS 10

## Introduction to Computer Science

### Fall 2010

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, we will cover some challenging material with 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 6:00-7:45 pm Classroom Unit 2

**Class Webpage:** <http://www.soe.ucsc.edu/classes/cmcs010/Fall10/>

**Webforum:** <http://forums.soe.ucsc.edu/>

**Instructor: Patrick Tantalo** (<http://www.soe.ucsc.edu/~ptantalo/>)

**Email:** [ptantalo@soe.ucsc.edu](mailto:ptantalo@soe.ucsc.edu)

**Office:** E2 257

**Office Hours:** MW 10:00am – 12:00pm, 1:00pm – 2:00pm, or by appointment

**Phone:** 831-459-3898

#### Teaching Assistants:

Michael Brown <[wknight@soe.ucsc.edu](mailto:wknight@soe.ucsc.edu)>

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**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 to that posting when you are looking for a lab to attend, not to the schedule of classes website.

**Text:** *An Invitation to Computer Science*, by G. Michael Schneider & Judith L. Gersting, published by Course Technology. You may purchase either the fifth or fourth (C++) edition. We will cover roughly:

4<sup>th</sup> ed.: chapters 1-4, and parts of chapters 8, and 11

5<sup>th</sup> ed.: chapters 1-4, and parts of chapters 9, and 12

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

<b>Written Homework</b>	<b>0%</b>
<b>Lab Assignments</b>	<b>30%</b>
<b>Quizzes</b>	<b>30%</b>
<b>Final Exam</b>	<b>40%</b>

**Homework** will be assigned for the purpose of quiz preparation, and will not be collected or graded. **Lab Assignments** are designed to familiarize students with the UNIX operating system, compiling and running C++ programs, sorting algorithms and their asymptotic run times, programming in C++, and the design of Turing Machines. These assignments will be turned in through your UCSC computer account

via the `submit` command, which will be described in the first lab assignment. **Please do not attempt to turn in any lab assignment by email. No credit will be given for such work.** Quizzes will be given in class starting **Tuesday October 5** 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 **Thursday, December 9** from **4:00 to 7:00 pm**. 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 follow 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.

### **Accommodations for Students with Disabilities**

If you qualify for classroom accommodations because of a disability, please get an Accommodation Authorization from the Disability Resource Center (DRC) and submit it to me in person outside of class (i.e. during office hours) within the first two weeks of the quarter. Contact DRC at 459-2089 (voice), 459-4806 (TTY), or <http://drc.ucsc.edu> for more information on the requirements and/or process.

### **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 lab 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/](http://www.ucsc.edu/academics/academic_integrity/) to see the full text of the University's policy on Academic Integrity.