378 & 378-HW Spring 2006

Welcome to 378! This class is the first in a transition phase for the department that is trying to tie 378 closer to 370 and subsequent classes. The ultimate goal is that in 370 you learn digital design. In 378 you build a computer system. In future classes you build the compiler and the operating system for your computer system, and who knows, beyond that. Thus, 378 will become more like "378-HW", with a lab component, as there was with 370. Since there is no 378-HW curriculum yet (it will take 2-3 years to really make, and this class is part of its development), this class is 378 with an experimental -HW component. There will be a strong incentive for you to participate in 378-HW, however; If you successfully complete the "-HW" side of this class, then you do not have to take any midterms or final exams. The disincentive, however, is that we are charting into unknown territory in this class. The -HW component has never been done before, and will be very hard and time consuming. Nevertheless, those of you who choose to participate in it, I think, will find it extremely rewarding.

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Book: Computer Organization and Design
3rd Edition - US edition (international edition might do fine as well)

Grading:
378:	40% Lab, 10% HW, 25% midterm, 25% final
378-HW:	40% Lab, 10% HW, 50% hardware lab
378 + 378-HW:	Some sliding scale between the two

You need to select early on (in about 2 weeks), which version of this class you would like to take: 378, or 378-HW. You can transition from 378-HW to 378 at any time, but not the other way around. If you do transition (what I listed as 378+378-HW above), we'll try and figure out some kind of pro-rated grading scale between the two class formats for you on an individual basis, depending upon when you transitioned. Because of the way 378-HW is structured, you cannot jump from 378 to 378-HW in the middle of the quarter (378-HW builds on itself).

Late Policy 1: In this class you can turn in any assignment 1 day late, **if** you email Steve **on the day it was originally due.** A short email saying, "I'm going to be a day late." is sufficient. You can use this late excuse for as many assignments as you need throughout the quarter (only one per assignment of course).

Late Policy 2: For **one** assignment only throughout the quarter you may turn it in a week late if you **email Steve and I** a humorous 80's era song parody ***of your own creation*** **on the day the assignment was originally due.** *These song parodies will be posted to the class web page.*

Late policy 1 and late policy 2 cannot be "stacked" to achieve an 8 day extension.

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Sickness / Emergencies / etc: contact us. We will of course work something out.

Academic accommodations: If you have a letter for me about academic accommodations needs, please come talk to me as early in the quarter as possible. We'll work together to find the right way to work the class around the accommodation needs.

Lecture: In this class, I lecture on the board. There are no lecture notes or hand outs (at least none on a regular schedule). Please take notes.

Section: This class has a formal "section". The teaching assistants manage these. Your attendance to them is purely optional, unless I mention in class that some new concept will be introduced there for lack of time to fit it into the main course (this should not happen unless we are running behind). In general, the goal of section is to answer questions and reinforce concepts that are left a little hazy in lecture.

Homeworks: This class has regular homeworks. You should work on homeworks individually.

Labs: In this class there is a significant lab component. In 378, this lab consists of digital design with the "Active HDL" tools. In 378-HW it consists of design with Active and *synthesis* with the Xilinx ISE tools and demonstration of working functionality on an XSV prototype board.

Labs are to be done in pairs or alone. Since someone always asks every quarter, pairs = 2 people, not 3 or more. You can divide the work between the two of you, but this division must be equal and both people must understand all sections of the lab they hand in. When the labs are graded we will be asking each person, individually, to describe the functionality of sections of their assignment. *Failure to demonstrate your understanding of the lab could cause you to receive a different lab score than your partner.* Furthermore, there are four instructors in this course. Collectively, we will be spending far more time in the lab area than any of you individually. What this means is if we see one partner in a group often working on a lab, and the other partner is often outside throwing a frisbee around in the sun, then we are going to come by and ask how are the pair of you dividing the work and how working with the other person is going. Partners that are not working well together will be split apart and you will finish the quarter working individually, or possibly reconstituted with another group (pairing the two workers together, and the two frisbee throwers together).

Cheating: Don't even go there; it will end your academic career.