

California Institute of Technology
Department of Computer Science
Computer Architecture

CS184a, Fall 2000

Course Information

Monday, September 25

Course Number: CS184a
Course Name: Computer Architecture
Term: Fall 2000
Time: MW 10:30AM–12:00PM
Place: Jorgensen 74
Instructor: Prof. André DeHon <andre@cs.caltech.edu>
office Jorgensen 258 x6569
Administrator: Cynthia Brady <cbrady@cs.caltech.edu>
office Jorgensen 256 x6247
URL: <<http://www.cs.caltech.edu/~andre/courses/CS184/>>

Student Requirements and Grading:

Grading is based on weekly assignments and a longer end-of-term assignment. (approximate weighting shown in brackets):

- Weekly Assignments [70%]
- Final Design Exercise [30%]

Grading and assignments may be very different in the second and third terms.

Writeups should be done in electronic form, using CAD or drawing tools where appropriate. Electronic submission will be preferred (and may be required for some assignments).

As I currently do not have a TA, I would like to reserve the right to use one of the better solutions submitted to an exercise as a reference solution (credited appropriately, of course). Please, indicate if you would prefer I **not** use your solution as such a reference.

Collaboration Policy Each student is expected to do his/her own work – including developing the details and writing the solutions. For the homeworks, you are free to discuss basic strategies and approaches with your fellow classmates or others, but detail designs, implementations, analysis, and writeups should always be the work of the individual. If you get advice or insights from others that significantly influenced your work, please acknowledge this in your writeups. The final exercise will be an individual assignment.

Reading, Text, and Lectures We will provide roughly one paper per lecture which the student is expected to read. Citations for additional reading material will be posted on the web along with the detailed syllabus. There is no required text as I will be pulling together material from many places. *Since this course is not based upon any particular text, following lecture will be essential to keep up with the course material.*

Hennessy and Patterson's *Computer Architecture A Quantitative Approach* is a classic text which some may find useful as a reference, especially for the second quarter of the course. This course will take a much broader look at computer architecture than H&P. Consequently, we will cover considerable material outside of H&P, and we may not cover the material in H&P at the level of depth presented there. Patterson and Hennessy's *Computer Organization and Design* provides a more elementary treatment and might be particularly useful for a review of logic design, computer arithmetic, and elementary RISC processor design for those who feel they need a deeper reference in these areas.

Course Materials For this quarter, I do not expect to make substantial use of unique computer software. Nonetheless, I would recommend you make sure you have access to an appropriate account, and I do expect writeups to be done in electronic form.

- **computers:** If you don't already have a CS account, you should get one. You can use the computers in the VLSI Lab or the computers in the UGCS Lab. To request an account, fillout the web form: `<http://www.cs.caltech.edu/cgi-bin/sysadmin/account_request.cgi>`
- **directory:** I will put course related material in `/cs/courses/cs184`.
- **electric:** In the course directory, I've installed a software package which includes a schematic editor. This is free software and you can pickup a copy for your home machine (unix, windows, mac) at: `www.staticfreesoft.com`