Syllabus for CS 341L - Introduction to Computer Architecture and Organization, Fall 2008

Class meeting times:

1-1:50pm MWF in Dane Smith Hall #132

You should be registered in *and plan to attend regularly in person* one of these three labs in Engineering/Science Computer Pod 109 (unless you are a remote student in Los Alamos, in which case you’ll attend via ITV and the special setup up there):

- 12:00-12:50pm Wednesday
- 2:00-2:50pm Thursday
- 10-10:50am Friday

Attendance will be taken at the labs and your grade will depend on your attendance.

Instructor:

Jedidiah Crandall, crandall@cs.unm.edu

Office #FEC 345B

Office hours 2-4pm Monday and 2-3pm Wednesday, or by appointment. If you happen to be in FEC anyway and my door is cracked open, it’s okay to knock. I crack the door instead of leave it all the way open in the winter because I’m running a heater in there. This may even sometimes apply during office hours.

Never hesitate to e-mail me about anything, it’s a very small class. It’s always okay to e-mail me directly.
TA:

Your TA is Matthew Barrick (barrick@cs.unm.edu). He will teach the labs, but can also help with homeworks, questions, etc. associated with the lecture part of the class if I’m unavailable for some reason.

Office hours: 10am-12pm, Tuesday and Thursday.
Office location: TBD, we’ll announce it as soon as we know or you can always ask Dan or Courtney in the front office where to find Matthew.

Final:

Friday, 19 December from 12:30pm to 2:30pm.
This is not negotiable so don’t make travel plans to leave before this, you will be expected to take the final at this time.

The following is subject to change without notice, but the final will likely be mostly composed of twists on test questions that a lot of people missed.

Prerequisites:

241L and ECE 238L. You should be comfortable with C and with using a UNIX environment.

Required Text Book:

Patterson & Hennessy: Computer Organization and Design The Hardware/software Interface, 3rd ed.

Revised printing is not strictly necessary, but the 3rd edition is. Do not worry if you get a copy that doesn’t come with the attached CD, we’ll make the necessary PDFs from the appendices available to you. Reading assignments from the book are on the Google calendar for the class, I reserve the right to assign supplemental reading that isn’t posted on the calendar.
**Mailing List:**
cs341l@cs.unm.edu

You need to join this mailing list or have me add you. Instructions for how to join the list are on the website.

**Web Page:**

http://www.cs.unm.edu/~crandall/341lfall2008/

**Schedule:**

The schedule will be posted as a Google calendar linked from the web page, the tests will be on the following four dates (and I’ll repeat the time for the final here, too):

- Test #1 – September 19th
- Test #2 – October 10th
- Test #3 – November 3rd
- Test #4 – November 24th
- Final – 12:30 to 2:30pm, December 19th

**Course Goals:**

At the end of the semester you should understand the basics of computer architecture and be comfortable programming in assembly language, and most importantly you should have some knowledge about how architectural issues can effect the performance, security, and reliability of the software you write.

From the catalog: “Survey of various levels of computer architecture and design: microprogramming and processor architecture, advanced assembly language programming, operating system concepts and input/output via the operating system.”
Grading:

4 tests, each 7.5% of your grade, final is 15%, homework is 5%.

Lab assignments are 30% and lab attendance is 20%.

I reserve the right to curve lab grades up at the end of the semester.

Tests and the final will be graded on a curve, and I will adjust each test and final grade individually, so if everyone averages fairly low you might get a 41 on the test which becomes a 95 after adjusting, then 95 is what gets entered into the grade book. I will never adjust down on the tests or final, so if you get an 80, e.g., on the final before adjustment then an 80 is the absolute minimum you could possibly get on the final after adjustment.

The final grade is a weighted average where 90.0 up is an A, 87.0 to 89.99999999 is an A-, 85.0 to 86.99999999 is a B+, 80.0 to 84.99999999 is a B, 75.0 to 79.99999999 is a C+, 70.0 to 74.99999999 is a C, 60.0 to 69.99999999 is a D, below 60.0 is an F. No such thing as an A+, C-, D+, or D-.

Late Policy, Attendance:

Homeworks are due as hardcopies in class at the beginning of class on the due date, unless I specify otherwise. Every homework assignment that is turned in late is half credit, up until the time of the next test (or final), at which time it’s too late to turn it in.

Lecture attendance will not be enforced (as it will be in the labs) but the tests reflect the lectures, not necessarily what’s in the book, so the tests will be that much harder if you miss class regularly. If you must miss class (car trouble, etc.), e-mail me at crandall@cs.unm.edu just in case I assigned some homework during class. Please do not eat, talk on the phone, surf the web, chat, etc. in the classroom. If something urgent comes up (need to use the restroom, make a phone call, etc.) just go ahead and get up and leave the room for a few minutes, no need to get my permission.

Remember that you can watch the class on video using the ITV system.

I highly recommend that you also come to the review section that is always the lecture immediately preceding a test. Just because it is a review session doesn’t mean you should skip it if you didn’t miss any of the lectures. I have to make the tests a week in advance to get them up to the ITV folks in time so chances are I’ll have already made the test before doing the review session.

Makeup tests, if you miss a test with my permission, consist of taking the test for half credit and an
essay to try to make up the other half. It’s very unlikely that the essay will improve your test grade.
You need my permission prior to the test to miss the test, and there has to be a good reason. Do not talk
to anybody about the test if you’re taking it before/after they are.

**You are expected to attend every lab session, and your grade will depend directly on it.**

You are free to attend other lab sessions if you need extra help, but if you plan to miss the one you are
registered for you need to make prior arrangements with Matthew.

**Cheating and Collaboration:**
All lab and homework assignments are individual efforts. Do not look at the code/solutions of others
or share your code/solutions with them. You can discuss assignments at a high level only.

Tests are closed-book, closed-notes, closed-Google, closed-calculator, closed-PDA, closed-cell-phone,
closed-cheat-sheet-on-the-inside-of-your-water-bottle, closed-neighbor, etc. In other words, closed-
everything. I'll make sure that any equations or reference material you need is included on the test.

All UNM academic policies regarding these matters will be fully enforced.

**Extra Credit**

There will be no extra credit, so study hard for the tests.