CMPE110 — Computer Architecture

Fall 2003
Class presentation

**Instructor:** Andrea Di Blas   email: andrea@se.ucsc.edu
    office: BE 61   office hours: Wednesday 5pm to 7pm,   tel: 459 4193

**TAs:** Christopher Foster, Chintan Desai
    sessions:
    office hours:

**Tutor:** Alexandra Carey   email: fire@se.ucsc.edu
    discussion session:
    office hours:

**Reader:** Eric Poon   email: elika@ucsc.edu
Class meetings: Monday, Wednesday, Friday from 3:30 PM to 4:40 PM
Location: Social Sciences 1, room 110 (quite appropriate.

Textbook: David A. Patterson and John L. Hennessy, Computer
Organization and Design: The Hardware/Software Interface,

Notes: the lecture notes will be posted on the website
http://www.cse.ucsc.edu/classes/cmpe110

Newsgroups: ucsclass.cmpe110
Approximate syllabus

week 0: Class presentation, history

week 1: Performance and benchmarks, Basics of logic design

week 2: Adders — QUIZ 1

week 3: HW multiplication — QUIZ 2

week 4: HW division, MIPS ISA — QUIZ 3

week 5: Single cycle CPU — QUIZ 4

week 6: Multicycle CPU — MIDTERM (11/7)

week 7: Pipelined CPU - QUIZ 5

week 8: Cache memory - QUIZ 6

week 9: Virtual memory (NO QUIZ — 11/28 is a holiday)

week 10: TO BE DEFINED — QUIZ 7

The final exam is on December 11, from 8:00 AM to 11:00 AM
TA/Tutor sessions

“Regular” TA/Tutor sessions will cover and expand on class lectures and homework exercises.

“Special” sessions will cover material that should be known from prerequisite courses and that we will not cover in class, or topics that anticipate what will be covered in class. For now:

week 1: basics of logic design

week 2: positional number representation

week 3: IEEE-754 floating-point numbers

week 4: MIPS addressing modes and assembly language
Grading policy and rules

- homework will contribute 10% to the final grade, Quiz\_zes 25%, Midterm 30%, Final 35%
- the worst homework and the worst quiz will be left out of the final score
- homework failed to be turned in, and missed quiz\_zes cannot be made up for (they score -1)
- missed midterm or final cannot be made up for, either, but with a certificate from a campus doctor they will be left out of the final score
- there is no curve in the class — passing is 60.00% and above
Final grades breakdown

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<th>Total score %</th>
<th>Ugrad LG</th>
<th>Grad LG</th>
<th>P/NP</th>
<th>Grad S/U</th>
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TESTS

Quizzes:

- a short quiz *approximately* on previous week’s material
- quizzes are on Friday *about every week*
- quizzes’ solutions will be posted on the web
- quizzes will be returned on Wednesday

Midterm and final:

- a midterm will cover the first lectures
- a final will will be comprehensive of the entire program
Tests rules

• Notes, textbook, any other book, calculators, palmtops, laptops, PCs, terminals, mainframes, cellphones, friends, or anything other than a pen (or pencil) are not allowed in any test. Computer architecture-related tattoos must be properly covered.

• Going to the restroom is not allowed in quizzes or during the midterm. During the final, going to the restroom is allowed only with appropriate escort.

• Students requiring special accommodations are invited to refer to the DRC.
Homework assignments

Homework will consist of:

- Selected exercises from the textbook. These will not be graded. Solutions to these exercises will be distributed in class.

- One or more exercises a week not from the textbook. These will be turned in and graded. Solutions to these exercises will be posted on the web.

- HW is posted on Wednesday and due on Monday at beginning of class.

- HW will be returned on Wednesday.
Homework rules

- hw must be on paper and handwritten
- name, due date, hw #, and page on top right corner on all pages (stapled)
- group work is ok, but ALL students in a group must turn in their hw, even if it’s identical (no joint submissions), and the names of all group participants must be indicated on each hw

(failure to do so will be considered cheating)
CHEATING

NOT a good idea! Why? Because:

- in the **homework** – why would you do that?
- in **quizzes** and **exams** it means SERIOUS troubles
  - from failing the class . . .
  - . . . to disqualification from the major
  - . . . and even dismissal from the university