University of California, Santa Cruz
Board of Studies in Computer Engineering

Introduction to Computer Organization
General Information and Syllabus

CMPE-12C/12L
Winter 2003
MWF: 3:30pm – 4:40pm
Class room: Thimann Lecture Hall 001

Instructor: Cyrus Bazeghi
E-mail: cyrus@cse.ucsc.edu
Office: BE 157C
Office Hours: MWF 2pm to 3pm and by arrangement
Office: (831) 459-2217
Cell: (831) 239-3176

Lab TA: Joseph Sung (chengyus@soe.ucsc.edu)
Class TA: Dan Yuan (dyuan@soe.ucsc.edu)

Important Dates

Final exam: March 20th, 8:00am – 11:00am
Midterm #1: January 27th
Midterm #2: February 24th

Recommended but optional text book


WWW site and Newsgroup

Website: http://www.soe.ucsc.edu/classes/cmpe012c/Winter03/index.html

Check this site often, as this is where the homework assignments, lecturer notes, homework, and test solutions are posted.

Newsgroup: ucsc.class.cmpe12c

Use the newsgroup to post questions to the tutors and the TA’s about lab and class material, ask questions to other students, or start discussions about class and lab material. Do not expect fast replies from the instructor, use email or the phone for a timely response.

Course Work – CMPE 12C

There will be weekly homework assignments which are required and graded. There will be two short midterm exams and one comprehensive final exam. The exam material will be based on homework and lecture material. No calculators are ever allowed for any exam, using one will be considered cheating.

The class grade is determined by the following criteria: Homework (20%), Midterm Exam #1 (20%), Midterm Exam #2 (20%) and the Final Exam (40%).
If you have any disability-related needs, be sure to contact the Disability Resource Center well in advance of any expected need.

**Lab Work – CMPE 12L**

You must be enrolled in CMPE 12L to remain in this class unless you have previously taken and passed the lab class, CMPE 12L.

We will be working with two assembly languages in this course based on two processors: a 32-bit MIPS type RISC processor and a neat 8-bit microcontroller from Motorola, the HC11.

There will be lab assignments throughout the quarter that will have you write assembly programs in one of the two languages covered in class. No collaboration is allowed on programming assignments unless explicitly permitted in the assignment write-up. When permitted, collaboration must be acknowledged and may only be with current course staff or students currently enrolled in CE12L. Failure to give credit when collaboration is allowed is a form of academic dishonesty and can be grounds for failure of the course. **You are not allowed at any point to share actual code with another student**, collaboration is the discussion of the topic and how to solve it at a high level.

**Academic Honesty**

Academic honesty is a requirement for the course. All assignments must be your own independent work; this includes homework, exams, and lab assignment.

What is cheating? In the class it is copying answers during exams, using a calculator, bringing in unauthorized reference material. Homework should be done independently though comparing answers is permitted.

In the lab cheating is sharing assembly code when not explicitly told it is permitted. Submitted labs are electronically compared to all other submitted labs, including past labs for similarities. The code checker tool checks all lab assignments for common cheating practices, renaming variables, moving code sections, changing comments and other formatting changes.

If a student is caught cheating in either the class or lab this will result in failure in the class and lab and further damage to your academic career as appropriate. **DO NOT CHEAT, IF CAUGHT YOU WILL BE DROPPED FROM THE CLASS AND THE LAB AND REPORTED TO YOUR COLLEGE AND THE DEPARTMENT.**

The lab (CMPE 12L) grade is determined solely by your performance on the lab assignments.

**Approximate Syllabus**

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<th>Topics</th>
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<td>Introduction</td>
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<td>MAL Assembly Language</td>
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<td>Number systems</td>
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<td>3</td>
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<td>Holiday on Monday. Data representations</td>
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<td>ALU operations, Floating Point Numbers</td>
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<td>5</td>
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<td>Data Structures: Array, stack, and queues</td>
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<td>Procedures and the Assembly Process</td>
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<td>Holiday on Monday. HC11 Assembly Language</td>
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<td>8</td>
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<td>I/O and interrupts</td>
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<td>9</td>
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<td>The C language</td>
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<td>Architecture: Virtual Memory</td>
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