

University of Pittsburgh
Department of Computer Science

CS/COE 0447 - Computer Organization and Assembly Language
Syllabus - Spring 2007

0. Goals and Course Description

To understand how software is run on a processor; To gain the ability to write efficient programs in assembly language; To understand a simple processor design; To gain knowledge about fundamental components of a computer system. In this course, we will deal with both hardware and software. Taking MIPS as an example, we will study processor organization (hardware) and write programs (software) in assembly language. We will also study relevant performance metrics so that we can evaluate different hardware and software implementations.

1. Textbook and Course Materials

Computer Organization & Design (Patterson & Hennessy) 3rd Ed., Morgan & Kaufmann, 2004.

Course materials will be distributed via the course web page <http://www.cs.pitt.edu/~wiebe/courses/CS447/Sp07>. Solutions and hints will be available at the TA's course website: <http://www.cs.pitt.edu/~abraham/CS447/Sp07>

The class will cover Chapters 1-5; Parts of Appendices A and B; and other material covered in lecture.

2. Prerequisites

CS 0445 - Data Structures (can be taken concurrently)

3. Instructor

Dr. Jan Wiebe (wiebe@cs.pitt.edu), 412-624-9590

Office hours: M, W 4:45pm ~ 5:45pm & by appt. @SENSQ 5409

4. TA

Hyunjin Lee (abraham@cs.pitt.edu, 412-624-8439)

Office hours: M,W 2:30-4:30 & by appt. @SENSQ 5501

5. Lecture/Recitation Hours and Classroom

Lecture: MW 6:00pm ~ 7 :15pm @SENSQ 5129

Recitation 1: M 7:25pm ~ 8:15pm @SENSQ 5502

Recitation 2: W 7:25pm ~ 8:15pm @SENSQ 5502

6. Student Evaluation

9 quizzes	5 points each (45 points total)
6 homeworks (HW)	10 points each (60 points total)
4 programming assignments (PA)	10 points each (40 points total)
3 MID-TERM exams	25 points each (75 points total)
FINAL exam	80 points

Full score = 300 points

Your final grade will be based on the following (grade-score) table:

A+	280 - 300	A	270 - 279	A-	260 - 269
B+	250 - 259	B	240 - 249	B-	230 - 239
C+	220 - 229	C	210 - 219	C-	200 - 209
D+	190 - 199	D	180 - 189	D-	170 - 179

7. Other Policies and Notes

- ❑ Late submission of homework or programming assignments will NOT be accepted.
- ❑ Plagiarism and cheating are strictly prohibited. Each student is expected to do his/her own work. Offense of this rule will result in a "0" in a particular PA, HW, or exam. The second offense will lead to an automatic "F" for the course and the offender may be subject to stronger actions.
- ❑ Students are expected to be present for all exams. Make-up exams will only be given in the event of an emergency (documented).
- ❑ The quizzes will consist of multiple choice and short answer questions. They will help give you incentive to keep up.
- ❑ The exams will not be multiple choice. Questions will, for example, ask you to trace or write assembly language code; translate between assembly language and machine language; perform signed/unsigned/floating point arithmetic; make performance calculations; label diagrams; draw logic circuits; give definitions; etc. The questions on the exams will all be similar to something we covered in lecture, on a homework, and/or on a programming assignment.
- ❑ Lectures will be mixtures of powerpoint slides and work on the board. Lecture notes