

**CS 371: Computer Engineering** Fall 2008  
MWF 12-12:50 (KH 006); T 10:50-12:00 (DS 121)

Instructor:

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Course Objective

Big picture, this course fills the gap between the statements of a high-level language (*e.g.*, Java) and the hardware logic gates from which a computer is built. If you want know how the gates work, ask and EE :)

Texts:

X. Mano, *Logic and Computer Design*, Prentice-Hall.  
W. Rynnion, *Structured Programming in Assembly Language for the IBM-PC*, PWS-KENT. (see also the web link to the "Art of Assembly.")

Labs:

Six hardware labs and/or problem sets.

Assignments

Three assembler programming assignments and/or problem sets.

Project

The project will be the construction of a simple CPU.

Homework:

"Daily" assignments (homework has no direct affect on your grade, but does affect the slush component.)

Exams:

A midterm and a final.

Grading:

Midterm	100
Labs	100
Programming Assignments	50
Project	100
Final	100
Slush	?
<hr/> Total	<hr/> 450

Late work:

Assignments are due on their due date at (or before) the start of class; assignments handed in after that time lose 10% a day (a day is defined as 24 hours).

Cheating:

**Don't.** Individual work is expected on your programs and exams (note that asking for help finding a "bug" is not considered cheating). You may work together on the homework. Read the honor code.

Tentative Schedule:

Week	Topic	Readings
1	intro / systems	Mano 1, 2
2	digital circuits	2, 3
3	cost reduction / K-maps	3, 4
4	Arithmetic circuits / look ahead	4, 5
5	multiplexers	5
6	just in case	
7	flip flops (do you have a pair?), shift registers	6, 7
8	controllers / buffer / MIDTERM	7, 8
9	introduction to assembler (architecture, debug)	Runnion 1, 2
10	data movement, simple math, introduction to 80X86 assembly language	2
11	buffer / project week	
12	integer arithmetic, control flow, procedures	3, 4, 5
13	I/O, bit operations	6
14	interrupts and I/O	9
15	FINAL	

Note If you have a disability which is documented with the Disability Support Services Office and wish to discuss academic accommodations with me, please contact me as soon as possible.