CMSC 311-101 (Fall 1995)

Professor:
Dr. Jeff Hollingsworth
4161 AV Williams
(40) 5-2708
hollings@cs.umd.edu
Office Hours:
Tu 1:00-2:30
W 10:00-11:00

TA:
Shekhar Patankar
1109 A V Williams
shekhar@cs.umd.edu
Office Hours:

Class URL: `http://www.cs.umd.edu/~hollings/cs311/f95/`

You are expected to check the class web page on a regular basis (at *least* weekly).

Catalog Description:

Introduction to assembly language. Design of digital logic circuits. Organization of central processors, including instruction sets, register transfer operations, control, microprogramming data representation, and arithmetic algorithms. Memory and input/output organization.

Objective:

An in-depth understanding of how a stored-program computer works and how it executes a machine-specific language. An understanding of the design tradeoffs faced by computer architects and engineers.

Prerequisites: CMSC 113

Topics Covered:

- Boolean Algebra, Logic Gates, Flip-Flops (2 weeks)
- Computer Elements (combinatorial and sequential circuits and memories) (2 weeks)
- Internal Code and Data Representation (2 weeks)
- Register Transfer Language (2 weeks)
- Organization and Simulation of a Stored-Program Computer (2 weeks)
- Assemblers and Writing an Assembly Language Program (4 weeks)

Required Course Text:

Computer System Architecture, (Third Edition), M. Morris Mano, Prentice-Hall, Inc., 1993.

Computer Organization and Design the Hardware/Software Interface, D.Patterson and J. Hennessy, Morgan Kaufman Publishers, 1994. (recommended)

Grading:

Final Exam	40%
Midterms (2)	30%
Programming Assignments (1)	15%
Homework (7)	15%

Exams:

Midterm #1 - October 12 (in class)
Midterm #2 - November 9 (In class)
Final - Fri. December 15 (8:00-10:00)

Late Policy:

Homework and programming assignments must be turned in when due. Late work will only be accepted in the case of serious illness or family crisis (i.e., death in the family).