

# Computer Organization (810:041) Spring 2009

**Time and Place:** 8:00-9:15 AM Tuesday and Thursday in ITTC 328

**Web-site:** <http://www.cs.uni.edu/~fienup/cs041s09/>

**Class Email List:** Send messages to 810-041-01-spring@uni.edu from your UNI account (let me know other email addresses that you want to use)

**Instructor:** Mark Fienup (fienup@cs.uni.edu)

Office: ITTC 313

Phone: 273-5918 (Home 266-5379)

Office Hours: M 9-11, 1:10-3; T 9:30-10:45; W 1:10-2; Th 9:30-10:45; F 9-11

**Pre- or Co-requisite:** **None** (Co-requisite of Introduction to Computing (810:051) or equivalent is advisable)

**Goals:** After this course, you should understand: (1) simple combinational and memory circuits used to build computer components, (2) how these circuits are organized to build a computer, (3) how data is represented and manipulated on the computer, (4) how to program in assembly language, (5) how high-level language programming languages are implemented with respect to the run-time stack and built-in data structures such as arrays and records, and (5) general concepts of hardware support necessary for an operating system.

**Required Text:** "The Essentials of Computer Organization and Architecture," second edition, by Null and Lobur; Jones and Bartlett Publishers; 2006; ISBN-10: 0-7637-3769-0.

**Assignments:** Assignments will be both "pencil-and-paper" exercises and assembly-language programming.

**Pedagogic Approach:** In class, I'll tend to break up the lecture with active and group learning exercises to aid learning. While this is not formally graded, part (5%) of your grade will be based on your participation in these in-class activities. Students benefit by (1) increased depth of understanding, (2) increased comfort and confidence, (3) increased motivation, and (4) being better prepared to work in groups on the job. This might sound great, but it will require you (and me) to work differently to prepare for class. Before the class, you must read the assigned reading, thought about what I've asked you to think about, etc.; otherwise you won't be able to effectively participate in your group during class.

**Grading policy:** There will be three tests (including the final). I'll announce tests at least one week in advance to allow you time to prepare. Tentative weighting of course components is:

In-class Work:	5 %
Assignments:	25 %
In-class Test 1:	23 % (February 26)
In-class Test 2:	23 % (March 31)
Final:	24 % (Tuesday, May 5 from 8-9:50 AM in ITT 328)

Grades will be assigned based on straight percentages off the top student score. If the top student's score is 92%, then the grading scale will be, i.e., 100-82 A, 81.9-72 B, 71.9-62 C, 61.9-52 D, and below 52 F. Plus and minus grades will be assigned for students near cutoff points.

**Special Notice:** In compliance with the University of Northern Iowa policy and equal access laws, I am available to discuss appropriate academic accommodations that may be required for students with disabilities. Requests for academic accommodations are to be made during the first three weeks of the semester, except for unusual circumstances, so arrangements can be made. Students are encouraged to register with Student Disability Services, 103 Student Health Center, to verify their eligibility for appropriate accommodations.