

Introduction to Computer Systems

CPMA 535-61

Fall 2006 (Second half)

Meeting Information

College Hall 220

Thursday 6:00—8:40 p.m.

Final exam: Thursday, Dec. 14, 6:00—8:40 p.m. Course web page: <http://www.blackboard.duq.edu>

Instructor

Dr. Jeffrey Jackson

Office: 441 College Hall

Office Hours: Monday/Wednesday 2:00—3:00, Tuesday/Thursday 3:00—4:30, or drop-in/appointment

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Textbook

- Computer Systems, A Programmer's Perspective, Bryant and O'Hallaron, Prentice Hall, 2003.

Objectives

This course is designed to provide you with a brief overview of many of the components and concepts of modern computer systems. Some of our specific objectives will be to understand:

- how data is represented within a digital computer;
- what types of instructions a computer understands at the lowest (“machine”) level;
- why it is important to “optimize” programs and how to go about doing so;
- what components are typically present in a computer memory system and how these components are organized;
- how various pieces of software are “linked” together to form a working program;
- how various levels of a computer system can handle exceptions to simple sequential processing, including hardware interrupts and concurrent processes;

- the role of virtual memory in modern computer systems.

Other topics may be covered based on student interest and time available.

Grading

Grading will be based on:

- Homework assignments 50%
- Final exam 50%

We will have weekly homework assignments. Some of the homework questions may require some programming. Most homework problems will come from the textbook. I attempt to cover all the material necessary to solve the homework problems in class, but you may need to read the textbook (or other sources) in order to solve some problems, and in general I highly recommend reading the textbook material associated with the lectures. Homeworks will normally be due the next week unless I say otherwise in class.

The final exam will be in class and closed book. It will consist of simple factual/definitional questions along with problems generally similar to those assigned for homework. I do not intentionally ask questions on exams over material that was not covered in lectures or homework assignments. The final exam will be comprehensive.

I expect that anything you turn in to me reflects your understanding of the material. So, for example, it's OK to work out the basic ideas together with one or more other students, but what each of you writes down to turn in to me should be your own working out of the details. It's especially annoying to me to grade the same small mistakes in two different papers. You should avoid annoying me ;-) Also, see the honor policy below.

While I will not formally take attendance or include it in grading, I expect regular attendance at lectures. I do not anticipate requiring any presentations in this class. I will at times encourage classroom participation by calling on you for an answer, but your level of participation is not directly included in your grade.

Late Work Policy: Because I plan to discuss homework the day it is due, and because I want to keep everyone up to date as much as possible, late work (without a good excuse) will receive no credit.

The final grade will be assigned as follows:

100--93 = A	92--90 = A-
89--87 = B+	86--83 = B
82--80 = B-	79--77 = C+
76--70 = C	69--60 = D
below 60 = F	

I attempt to write exams that I believe you can do reasonably well on if you work hard. I also may adjust my grading on a homework or exam if some of the material seems to be

more difficult than I expected. So when the end of the semester comes, I do not deviate much if at all from the above numbers in determining your final grade. That is, you should not expect a final curve to help you out if your grades are low all semester. Also notice that I do give minuses as well as pluses. So if an A- would distress you, plan to get a 93 or better.

Honor Policy

All exam work that you turn in, whether in-class or take-home, must be your own, although of course any clarification of questions that you receive from me is acceptable. Cheating on an exam will result in course failure. Similarly, any homework you turn in should represent your understanding of the material, not be a copy of someone else's work. If any part of your homework is copied, I may give a 0 to the entire assignment. Two or more copying incidents may result in course failure.

Schedule

We are scheduled to have 7 class meetings plus the final exam. The tentative schedule is (one class per topic):

- Introduction and Data Representation (Chapters 1 and 2)
- Machine Language (Chapter 3)
- Code Optimization (Chapter 5)
- Memory Hierarchy (Chapter 6)
- Linking (Chapter 7)
- Nonsequential control flow (Chapter 8)
- Virtual Memory (Chapter 10)

Notes

Students with documented disabilities are entitled to reasonable accommodations if needed. If you need accommodations, please contact the Office of Freshman Development and Special Student Services in 309 Duquesne Union (412-396-6657) as soon as possible. Accommodations will not be granted retrospectively.

The information in this syllabus is subject to change at the instructor's discretion.