

9-2002

# CS 231.01: Computer Architecture and Assembly Language Programming I

Douglas Lawrence

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# CS 231, Fall 2002

## Computer Architecture and Assembly Language Programming I

**Instructor:** Doug Lawrence  
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**Phone:** 243-5605, 243-7705 (other work)  
**Office:** Social Science 404  
**Office Hours:** Mon. and Wed., 9-11 and by appointment  
**Class:** MWF 8:10 – 9:00 AM  
**Room:** Social Science 356  
**Final:** Thursday, December 19, 8:00 – 10:00 AM  
**TA(s):** To be announced  
**Prerequisites:** CS131, CS132  
**Textbook:** “*Computer Organization and Design*”  
– by David Patterson and John Hennessy (Required) ISBN: 1-55860-428-6  
“*The MIPS Programmer’s Handbook*”  
– by Erin Farquhar and Philip Bunce (Not required until next semester)

### Class Objectives

- ▪ Learn the computer systems functional breakdown (Major objective)
  - ▪ Processor, memory, I/O, software interface
  - ▪ Implementation of the CPU
  - ▪ Interconnection structures
- ▪ Understand how computer instructions and data are formatted
- ▪ Understand digital logic
- ▪ Understand the trade-offs made in architecture design
- ▪ Prepare for future software and hardware classes

<b>Grading Policy:</b>	<b>Homework:</b>	<b>50%</b>
	<b>Quizzes:</b>	<b>20%</b>
	<b>Exams (3):</b>	<b>10% each</b>

### Prerequisites

It is your responsibility to have taken CS131 and CS132 prior to taking this class. This instructor can't be responsible for bringing you up to speed on material on which you should already have a grasp.

### Homework and Exams

Homework is due in class on the day it is due. It must be legible and on 8½” by 11” sheets of paper. No legal size paper please.

PLEASE NOTE! If you start missing several assignments, your chances of passing the class are EXTREMELY slim. You would be advised to drop out and take the class some other time. You CANNOT pass on the merits of your exam scores alone. If you can't be there to take an exam, you must make arrangements with me **prior** to missing the exam. Makeup exams will be given during my office hours and only to those people who have contacted me **PRIOR** to missing the exam.

The graded homework will typically be returned 7-10 days after submission. **Late homework will be accepted, but it will be marked down 10% for each day it is late and won't be accepted once the assignment has**

**been returned to the rest of the class.** (Late is after class on the day it is due.) Any exceptions to the late rule must be made prior to when the homework is due and the excuse needs to be a good one – just too busy won't cut it.

Collaboration on homework is encouraged, but you are responsible for personally writing and understanding the solutions. No “group” assignments will be accepted. Obvious duplications will result in a splitting of the grade between the students involved, regardless of who did the copying. In the past I have received assignments that were, word for word, identical. When approached the students said they had worked together, which is fine. However, letting someone else figure out the answer and then copying it is not “working together”.

A note on web sites: The text we are using is widely used and therefore there exist numerous web sites with answers posted. I have the answer key and can tell if you have copied the answer from a web site. I don't necessarily consider this cheating. However, it indicates that you probably don't know the material if you have copied the answer from somewhere else. Therefore, 0 points will be given for these answers.

### **Grading**

I will not grade on a curve. Grades will be assigned in a standard way:

90-100 : A  
80-89 : B  
70-79 : C  
60-69 : D  
0-59 : F

Some of you may be taking this class with the **pass/no pass option**. The Computer Science policy is that “the student must earn the equivalent of a letter grade of C for pass”.

### **Attendance**

Attendance is not mandatory. You all have different backgrounds and some may feel you already know the material that we'll be covering. You have to make sure you turn in your homework on time, take the quizzes and show up for the exams. If you can do well without coming to class, that's fine with me, although I don't see how you can do it. Missing a class is no excuse for turning in your homework late – it's your responsibility to get the questions and find out the due dates. My personal theory is that you need to attend class to get the complete benefit of a college learning environment, especially core classes like this one.

### **Course Material**

I will attempt to get the course materials online, but as of the writing of this syllabus I am not making promises. Web sites take time to manage and my experience has been that no one goes to them unless they absolutely have to. If you feel you need to get the lecture notes from me, email me or come and see me.

### **The Book**

My recommendation is to just start reading. Keep reading even if you don't understand it. Don't read too much at one sitting. Use the Internet. Don't try to understand and grasp the fine details of every diagram since you won't understand them all right now. This book will be used next semester in CS232 as well so we will cover about half of it this semester. Chapters to cover and the order we will cover them will be discussed in class.

### **Miscellaneous**

**Email:** You must have an email account that you read regularly. During the semester I send out items of interest, plus this allows me to contact you more easily.

**Profanity:** Profanity and obscenity will not be tolerated in any fashion, whether it's on the homework, in class, email or in your email address. Last semester I had some people who found it humorous to use profanity in their email address.

**Incompletes:** Every year several people fail to complete the class and want to take an incomplete. I greatly discourage this so decide now, at the beginning of the semester, not to do it. Please note that there are financial aid implications to taking an incomplete. See page 21 of the catalog for more information.

**Students with disabilities:** If you have a disability of any kind and it affects how you might perform in this class (test taking, homework, attendance, etc.) please see me. I am more than willing to make accommodations. I may require that your disability be certified by DSS.

**Important Dates:**

September 5 - Late registration fee begins – Autumn 2002 Registration begins	November 4-19 -
September 13 - Last day to make meal plan changes day holiday	November 5 - Election
September 18 - Financial Aid appeal deadline Day (NO CLASS)	November 11 - Veterans
September 23 - Last day to drop/add by CyberBear Vac. (NO CLASS)	November 27-29 - Thanksgiving
October 14 - Last day to drop/add (no \$\$\$ back) withdraw	December 6 - Last day to
October 14 - Last day to change grade option begin	December 16 - Finals
October 28 - Advising – Spring 2003	