

## CS 203: Computer Organization, Fall 2012

AEC 500

9:30am-10:45am, 2:45pm-4:00pm T,Th

[http://cs.lafayette.edu/~taylorm/2012\\_CS203](http://cs.lafayette.edu/~taylorm/2012_CS203)

Office hours: Monday 10:30-11:30, Wed 1:30-2:30, by appointment, or just drop by

Dr. Matthew Taylor (“Matt” is preferred)

Office: AEC 522

Email: [taylorm@lafayette.edu](mailto:taylorm@lafayette.edu) (Please tag emails with [CS203] for fastest response)

Office phone: 610-330-5417

This course provides an introduction to digital logic, computer components, memory, computer arithmetic, instructions sets, interrupts, and microprogramming. Policies in this syllabus are subject to revision, with notice.

### Prerequisites

CS 150 (formerly CS 103)

### Course Objectives

- Develop a machine-level understanding of C, analyzing and enhancing programs to improve performance.
- Discuss the behavior of the computer memory hierarchy and different processor designs.
- Understand and present material on understanding combinational circuits.
- Read and explain a contemporary conference paper related to computer architecture.

### ABET Outcomes

After the course, students should have:

- An ability to apply knowledge of computing and mathematics appropriate to the discipline.
- An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs.
- Recognition of the need for and an ability to engage in continuing professional development.
- An ability to use current techniques, skills, and tools necessary for computing practice.

### Course Schedule

An evolving schedule, along with assignments and lecture slides, may be found on the course webpage.

**Midterm:** Thursday October 18<sup>th</sup>. 2:45-6 pm (but should only take <2 hours)

**Final:** There will be a final – wait for the date to be announced by the registrar before scheduling any trips!

### Assessment Information and Grading Policy

The course grade (subject to change with notice) will be based on:

- 10% class participation / reading responses,
- 30% from projects/labs,
- 30% midterm, and
- 30% final.

### Course Reading List

- Computer Systems: A Programmer’s Perspective, Bryant & O’Hallaron. **Second edition**, ISBN 0-13-610804-0. (Note, page numbers are different for the international version.)

### Optional

- C In A Nutshell, Prinz & Crawford. ISBN 0-596-00697-7.

Reading assignments will be announced in class and posted on the course webpage. *For every class that has a reading assignment, a reading response must be posted to Moodle by 6am the day of the class.* There may be specific questions that I ask you to answer in an assignment, if not, please follow the following guidelines:

Responses may contain:

- reflections on the reading,
- questions the reading generates,
- and/or summaries of the reading.

Unless otherwise stated, I expect responses to be ½ to 1 page in length and should not take you longer than 20 minutes to write. The responses will help the instructor shape the upcoming class but they will not be individually graded.

With the exception of reading responses, late work will be accepted, but the grade will be reduced by 10% for every day that it is late. For example, suppose a lab would be graded as 85/100. If it were handed in 1 hour late, it would receive 75/100. If it were handed in 25 hours late, it would receive 65/100.

### **Email**

I expect to answer student email within 48 hours, unless it is the weekend. Feel free to ping me if it has been more than two working days and I have not responded. To make sure your mail gets filtered correctly (i.e., gets my attention), please begin emails with a subject of:

[CS203]

### **Phones/laptops/i-Things during lecture**

You may use electronics to take notes and/or look up information in class. However, please make sure your device is silent. Penalties for electronic noise in class include singing a couple of bars of a song in front of the class and leading class a discussion during the next lecture.

Note that these devices also present temptations that many students find irresistible. You should not use your devices to play games, check Facebook, respond to email, etc. Such activities not only distract you, but (more importantly) they may distract others around you.

### **Labs**

Lab periods are times for me, the instructor, to help you, the student. Lab attendance is optional, but I encourage you to at least attend labs when a new assignment is distributed. I will typically introduce the lab and give you useful information --- if you miss the introduction, I encourage you to talk to other students. I intend to remind you in class when new assignments are distributed, but the course webpage will always clearly list this information, as well as due dates. Unlike in lecture, I do not have a problem with you checking email, posting about how awesome your lab is on Facebook, etc., as long as it is done discretely, does not take up much of your time, and is not distracting to others.

### **Academic Honesty Statement**

All students are expected to adhere to the college policy on academic honesty as listed in the Student Handbook. Homework will be done individually unless otherwise specified in writing on the assignment. You are allowed to discuss projects and labs with other students but may not share code. *Any work that is not fully done by an individual must list all collaborators.*

### **Request for Accommodations**

In compliance with Lafayette College policy and equal access laws, I am available to discuss appropriate academic accommodations that any students with a disability require. Requests for academic accommodations need to be made during the first two weeks of the semester, except in unusual circumstances, so that arrangements can be made. Students must register with the Office of the Dean of the College for disability verifications and for determinations of reasonable academic accommodations.