CSCI 2271: Computer Systems
Spring 2016 Syllabus

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Goals of this Course

All of you should know how to program in Java. Java is a high-level, machine-independent, object-oriented programming language. This means that when you write a program, you think in terms of the real-world objects you are modeling, and not the machine that is going to execute the program. Java supports this way of programming by allowing you to create and manipulate objects, without knowing (or caring) how they are implemented.

The C programming language has a syntax similar to Java, but is very different in spirit. When you write a C program, you think in terms of the underlying machine. There are no classes, and no objects. You know exactly (often to the bit level) how everything is implemented. In this regard, C is much closer to a fancy assembly language than to Java.

In this course you will learn how to write programs in C. There are several reasons why this is important:

- It helps you understand Java better, by showing you the kinds of things that Java programs do for you without your knowledge.
- It helps you write more efficient Java, because you will know how to circumvent constructs that require too much overhead.
- It acquaints you with the system-level concepts that are part of modern-day computing.
- It shows you a different way to think about programming, one in which you get enormous control over how your code is executed.
- It gives you the skill to read and write C, which allows you to tap into the huge amount of existing C code (and jobs requiring the writing of C code).
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People, Places, and Times

I teach two sections of this course. Section 1 meets MWF from 9-10 in Fulton 250. Section 2 meets MWF from 12-1 in Fulton 415. My office hours are Mon, Tues, and Fri from 1-3.

Office hours are the times that I am guaranteed to be in my office. However, I am at school most days from 9am to 5pm (except Thursdays), and am in my office when I'm not teaching. Feel free to see me any time I am in. We can also schedule an appointment. Do not worry about seeing me too much. I like to give help—it's my job. Feel free to see me early and often.

There are five graders for the course. All graders hold their office hours in Fulton 160, phone x2-8425, at the following times TBA:

Cam Lunt (luntc@bc.edu)
Andrew Francl (francl@bc.edu)
Eliott Chapuis (eliott.chapuis@bc.edu)
Neal McGovern (mcgoverne@bc.edu)
Nathan Schwann (schwann@bc.edu)

They should be sitting at the front desk. Feel free to see any of them for assistance with general course concepts. Their grading assignments are:

Cam grades *A-Chilom*.
Andrew grades *Coffin-J*.
Eliott grades *K-Metelus*.
Neal grades *Mitchell-Setiadarma*.
Nathan grades *Shamlian-Z*.

If you have a question about why you got a particular grade on a HW assignment, see the appropriate grader first. If you still cannot resolve the issue, then see me.

Textbook Info

There is no ideal text for this course. You definitely need something that will act as a C reference manual. I have chosen C in a Nutshell by Prinz and Crawford. The nice thing about this book is that you can access BC's online version for free. There are several editions of the book. It doesn't matter which one you use.

Homework Policy

This course will have weekly homework assignments. I am going to be a stickler for on-time homework. I firmly believe that the class will run smoother and be livelier if everyone is at basically the same point. If you are late doing the assignments, not only do I have to go slower, but you can't contribute as much to the discussion. In effect, you are dragging the rest of the class down with you.

Another reason to do the assignments on time is that you can let me know if I'm piling it on too hard. It is worth your while to give me feedback before it is too late.

Quizzes and Exams

I expect to give two midterms and a final. The midterm exams will be on Wednesday February 24 and April 13. The final exam will be at the officially-scheduled time. The exam for section 01 is Tuesday May 10 at 12:30; the exam for section 02 is Friday May 13 at 9:00.

There will also be a quiz every Wednesday at the end of class. Each quiz will cover material taught during the previous week (but not that day). Their purpose is to force you to keep up. Maybe you will even be forced to review the material each week.

Grading

Your final grade will be computed based on my understanding of your understanding of the material. In my experience, exams tend to be the best indicator of understanding. I realize that you will be spending a lot of time on homework, and want that to "count" towards your grade. My belief is that if you do the homework diligently and understand what you did, your test scores will correspond. Conversely, if you spend your homework time doing trial-and-error and getting too much "help" from friends, your test scores will plummet and your time will be wasted.

As a first-cut, general guide, I use the following percentages in computing your grade:

Homework:	30% total
Quizzes:	10% total
Midterm Exams:	15% each
Final Exam:	30%

Attendance

You are expected to come to class. I want you to come to class, and try hard to make it worth your while. I post class notes after each class, and I hope that you find them useful. But the question and answer interchanges that occur during class are just as valuable as the material from the notes.

That being said, please do not come to class when you are ill. If you miss an assignment or exam due to illness, let me know and we can arrange for it to be made up. If you are ill for an extended period of time, please let the Dean's office know.

Academic Integrity

You are expected to work on assignments individually. It is ok to discuss an assignment in general terms with others, but the details (including all C code) must be yours alone. It is **NOT** ok to "just take a look" at

someone else's code. If you are confused or stuck, the best thing to do is to ask me. Really. Violations are subject to BC's academic integrity policy. For details, see the URL www.bc.edu/integrity.

Disability Accommodations

If you are a student with a documented disability seeking reasonable accommodations in this course, please contact Kathy Duggan, (617) 552-8093, dugganka@bc.edu, at the Connors Family Learning Center regarding learning disabilities and ADHD, or Paulette Durrett, (617) 552-3470, paulette.durrett@bc.edu, in the Disability Services Office regarding all other types of disabilities, including temporary disabilities. Advance notice and appropriate documentation are required for accommodations.