Syllabus

EECS 211: FUNDAMENTALS OF COMPUTER PROGRAMMING II

http://www.eecs.northwestern.edu/~iraicu/teaching/EECS211/index.html

Quarter: Spring 2010

Lecture Time: Monday/Tuesday/Wednesday/Friday, 1:00PM - 1:50PM

Location: TECH M164

Instructor: Dr. Ioan Raicu (iraicu@eecs.northwestern.edu, 1-847-491-8163)

- Office Hours Time: Tuesday/Friday, 2:00PM - 3:00PM
- Office Hours Location: TECH M384

Teaching Assistants:

- Martin Luessi (m-luessi@northwestern.edu)
  - Office Hours Time: Wednesday/Thursday, 2:00PM - 3:00PM
  - Office Hours Location: TECH M472

- Jingnan Wang (jingnanwang2013@u.northwestern.edu)
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  - Office Hours Location: TECH M472
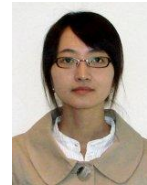
Course Overview

This class covers a variety of topics:

- Introduction to UNIX
- Introduction to C++
- Object-oriented programming
- Control structures
- Functions
- Abstract data types
- Pointers
- Classes

This course is required for computer science majors.

Prerequisites

CS 111 or equivalent. You should already understand basic concepts, such as variables and variable scope, functions and function parameters, iteration, recursion, and simple data structures.

Required Texts

The textbook is [C++ How to Program](#), 6th (or 7th) edition, by Deitel and Deitel.

Detailed Course Topics

The tentative course topics are:

- Introduction to C++
- Introduction to Makefiles
- Variables, types, and expressions
- C++ classes and control structures
- Functions
- Arrays and vectors
- Pointers
- Operators
- Classes
- Search and sorting
- Data structures
- Streams and files
- Strings

Software

We will use g++ (GNU C++) as the C++ compiler for this course is G. It is available on Linux and MacOS X, and easily installed using [Cygwin](#) on Windows.

To support test-driven development (TDD), we'll use the [CppUnit](#) framework. You can get it easily with [Cygwin](#) on Windows and [MacPorts](#) on MacOS X. We will also use [Makefiles](#) to manage project code.

We recommend but do not require [Code::Blocks](#) for Windows users and [XCode](#) for MacOS X users as development environments. Output from other C++ compilers, such as Microsoft Visual Express, will not be accepted, because we can't easily and automatically compile and test such code.

Mailing lists

The course mailing list can be found at http://www.eecs.northwestern.edu/mailman/listinfo/eecs211. Please sign-up with your preferred email address. The mailing list will be the primary communication mechanism outside of the classroom.

Use the mailing list to post questions on the material or assignments, and to answer posted questions. Posting to the mailing list rather than emailing the staff will often get you an answer much faster. If you need help on an error message, then you should post the exact error message and the line of code where it occurred. Even better, try to write a small program that replicates the error, and post that.

Never post complete answers to homework, even broken ones. You may post solutions to problems from the textbook that are not homework.

You are encouraged to post useful or interesting links that are relevant to the class may also be posted. Just try to keep all discussion on topic.

Grading

Your final grade will be composed of about 8 assignments, 4 quizzes, and 1 exam:

- Programming Assignments – 50%
- In-class quizzes – 25%
- Final – 25%

When computing your final grade, your lowest assignment score will be dropped, which means that you can have 1 late assignment without penalty.

In general, final grades will be assigned as follows:

- A   93% - 100%
- A-   90% - 92.9%
- B+   87% - 89.9%
- B   83% - 86.9%
- B-   80% - 82.9%
- C+   77% - 79.9%

- C   73% - 76.9%
- C-   70% - 72.9%
- D+   67% - 69.9%
- D   63% - 66.9%
- D-   60% - 62.9%
- F   0% - 59.9%

Getting Help and General Advice

Here are some general guidelines:

- Participate in class and ask lots of questions.
- Post to the mailing list. Posting your questions there will usually get you an answer much faster than if you email them to us, or wait until class/office hours.
- Email or visit the instructor. When emailing, always put "[EECS211]" in the Subject line, followed by a short but clear topic.
- Check the course web pages for updates.
- Study early and start assignments early. The last minute is the worst time to need help.

Tardiness

You will generally have 1 week to complete most assignment, and they will be due at 11:59PM on Monday nights, unless otherwise posted. There will be a 1 hour grace period to submit your assignments, but they will not be accepted after that, and you will receive a 0 for the assignment. When computing your final grade, your lowest assignment score (of the 8 programming assignments) will be dropped, which means that you can have 1 late assignment without penalty.

The same policy will hold for quizzes, to avoid having to reschedule quizzes. Of your 4 quizzes, your lowest score will be dropped. This means that you can miss or perform poorly on 1 quiz, without it affecting your overall grade.

Plagiarism

You must **never** copy solutions from any source or give your homework to another student. **Cheating will result in a failing grade for the course.** University policy requires that instances of cheating be reported to the Dean.

However, you are allowed and encouraged to discuss the exercises. This means asking for suggestions when you are stuck and discussing examples that are similar but not part of the exercise. You must never share code or solutions to the assigned problems.