Overview

What is CIS 110? Introduction to programming and computer science.

Goals:
- Demystify computer systems: what can computers do?
- Demystify computer science: what are the intellectual underpinnings?
- Demystify computer scientists: how do we think?

Topics:
- Programming in Java.
- Computer organization and assembly language
- Applications to science, engineering, and commercial computing.

"Computers are incredibly fast, accurate, and stupid; humans are incredibly slow, inaccurate, and brilliant; together they are powerful beyond imagination." — Albert Einstein

The Basics

Lectures.
- [Benedict Brown]
  - Monday, Wednesday, Friday, Towne 100, 9am
  - Office hours: MWF after class and MW 4-5 in GRW 258
  - Email: bjbrown@seas.upenn.edu

Sections.
- Wednesday or Thursday
- Two TAs per section: twice the fun!
- Clarify lecture material, tips on assignments, group activities.

Computing laboratory.
- TA office hours in Moore computer lab (TBD)
- Help with debugging.

Full details and office hours. See www.seas.upenn.edu/~cis110

Grades

Course grades. No preset curve or quota.
- 9 programming assignments. 40%.
- Sections attendance and participation. 10%.
- 2 exams. 50%.
- Extra credit and staff discretion. Adjust borderline cases.

Check grades. Course web site

Course Materials

Course website. [www.seas.upenn.edu/~cis110]
- Programming assignments and checklists.
- Submit assignments.
- Lecture slides.
- Lecture videos.
- Discussion board.

Required text. Sedgewick and Wayne. Intro to Programming in Java: An Interdisciplinary Approach.

Programming Assignments

Desiderata.
- Address an important scientific or commercial problem.
- Illustrate the importance of a fundamental CS concept.
- You solve problem from scratch!

Due. Fridays 9pm via Web submission.

Computing equipment.
- Your laptop. [OS X, Windows, Linux, iPhone, ...]
- Moore computer labs

Advice.
- Get started; plan multiple sessions.
- Seek help when needed.
- Our job is to help you!
What’s Ahead?

Lecture 2. Intro to Java.

First section. Meets next week on Wednesday/Thursday.

Not registered? Go to any section now; officially register ASAP.
Change your section? Contact Dr. Brown [bjbrown@cis.upenn.edu]

Assignment 0. Due Friday, January 20, 9pm.
. Read Sections 1.1 and 1.2 in textbook.
. Install Java programming environment + a few exercises.
. Lots of help available, don’t be bashful.

END OF ADMINISTRATIVE STUFF

Languages

Machine languages. Tedious and error-prone.

Natural languages. Ambiguous and hard for computer to parse.

High-level programming languages. Acceptable tradeoff.

“Instead of imagining that our main task is to instruct a computer what to do, let us concentrate rather on explaining to human beings what we want a computer to do.” – Donald Knuth

Hello, World