

CIS 110

Introduction to Computer Programming
University of Pennsylvania
Spring 2012

Benedict Brown

www.seas.upenn.edu/~cis110

Overview

What is CIS 110? Introduction to programming and computer science

Goals.

- Demystify computer systems: what can computer 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



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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@cis.upenn.edu. *and by appointment*

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

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Grades

Course grades. No preset curve or quota.

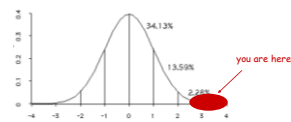
~9 programming assignments. 40%.

Section attendance and participation. 10%.

2 exams. 50%.

Extra credit and staff discretion. Adjust borderline cases.

Check grades. Course web site



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Course Materials

Course website. [www.seas.upenn.edu/~cis110]

- Programming assignments and checklists.
- Submit assignments.
- Lecture slides. *usually posted after lecture*
- Lecture videos. *don't always record properly, and don't record everything!*
- Discussion board.

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



skim before lecture; read thoroughly afterwards

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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.

- Start early; plan multiple sessions.
- Seek help when needed.

our job is to help you!

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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 [b3brown@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.
- Register for Piazza [<http://piazza.com/upenn/spring2012/cis110>]
- Lots of help available, don't be bashful.

END OF ADMINISTRATIVE STUFF

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Languages

Machine languages. Tedious and error-prone.

Natural languages. Ambiguous and hard for computer to parse.

Kids Make Nutritious Snacks
Red Tape Holds Up New Bridge
Police Squad Helps Dog Bite Victim
Local High School Dropouts Cut in Half
[real newspaper headlines, compiled by Rich Pattis]

'At Last' Singer Etta James Terminally Ill
[New York Time Online, 16 December 2011]

"Santorum is an Unpleasant By-Product of Sex"
[deredactie.be, 6 January 2012]

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



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Hello, World

