

CS125: Introduction to Computer Science

Lecture 00000001₂

Bill Chapman

Mr. Speaker, Mr. Vice President, Members of Congress, my fellow Americans:

Tonight marks the eighth year that I've come here to report on the State of the Union. And for this final one, I'm going to try to make it a little shorter. (Applause.) I know some of you are antsy to get back to Iowa. (Laughter.) I've been there. I'll be shaking hands afterwards if you want some tips. (Laughter.)

And I understand that because it's an election season, expectations for what we will achieve this year are low. But, Mr. Speaker, I appreciate the constructive approach that you and the other leaders took at the end of last year to pass a budget and make tax cuts permanent for working families. So I hope we can work together this year on some bipartisan priorities like criminal justice reform -- (applause) -- and helping people who are battling prescription drug abuse and heroin abuse. (Applause.) So, who knows, we might surprise the cynics again.

But tonight, I want to go easy on the traditional list of proposals for the year ahead. Don't worry, I've got plenty, from **helping students learn to write computer code** to personalizing medical treatments for patients....



10 Jobs With the Most Potential You Should Look For in 2015 and 2016

WORK BY MELISSA BURNS

What jobs will be trending in 2015-2016? Which occupations are going to increase in demand and are worth your investment? These are the questions you should ask if you are choosing a college or want to switch careers. This article is aimed at helping you find the answers. Here are 10 jobs that have the most potential that you should consider in the future:

1. Software application developers

Training needed: Bachelor's degree; practical experience for entry-level.

Job outlook: This is an undisputed [job of the future](#). Software surrounds us every minute of our lives, and people who create it are never going to be out of job and will always get high salaries. The ongoing revolution in

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History

Google's 'Security Princess'

YouTube

Advanced Micro Devices

LED

Mosaic/Netscape

Siebel Systems

Plasma screen

Hal

Microsoft Flight Simulator

Oracle

PayPal

Yelp!

Integrated Circuit

Project Gutenberg

Apple's Swift

Gene Hackman

Eudora

Introductions

- Bill
- you
- the course

about CS125

The science

The course

About you: life of a CS125 student

course themes

Machine Architecture

Procedural Programming

OO Programming

Software Engineering Principles

Recursion

Advanced topics and principles

BTW: proficiency exam
sign-up links @ course website

Machine Architecture

Procedural Programming

OO Programming

Software Engineering Principles

Recursion

Searching, sorting, algorithm analysis

course applications

- find paths through mazes
- scientific visualization
- contacts app for friends
- create randomized love letters
- determine efficiency of algorithms
- modify (filters) images
- android and iOS
- computer generated song
- sorting and search data
- chase routine for Pacman ghost
- search movie script
- encrypt/decrypt messages
- solve puzzles

"Apple is at the intersection of technology and the liberal arts, the intersection of technology and the humanities." – Steve Jobs

weekly activities/responsibilities

pre-MWF: Reading & Turing's Craft exercises

MWF: Lectures

Weekly: Lab/Discussion Sections

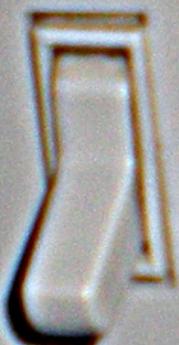
Most weeks: Quizzes/short assessments - start 3rd week

Programming ("MPs"): 7-8 of them

Newsgroup & Community: Piazza

+ "Debug Your Brain" (starts 3rd week)

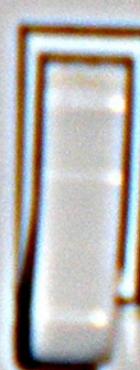
1



2



3



Guaranteed grading

45% Quizzes (~10, weekly)

90: A-

15% Machine Problems

80: B-

5% Lecture participation

65: C-

5% Section achievement points

5% Turing's Craft exercises

25% Final Exam

To pass, must attempt all MPs and other required items

how to succeed in CS 125

Keep up on daily readings / Turings craft examples
Lectures and Labs will require brain power.

Attend and participate in all lectures and labs

Spend time and effort on MPs

Communicate with your CS community

Public Qs : **Piazza**

Private Qs : **Piazza (private messages)**

Doyens!

what now?

Course website:

URL: <http://courses.engr.illinois.edu/cs125>

Read Course Policy

Read Course Notes #1 & #2

before next Lecture (links on Lecture page)

Bring your laptop to your AY_ section

(you will be setting up your coding environment)

java

eclipse

svn

Honors Section CS 196-25?

3hr Proficiency Exam (see CS125 home page)

just registered today, or are planning on registering in the future?

email: wlcchapma@illinois.edu with your netID

a little java

```
System.out.println("This message will appear");
```