Presentation 1

Course Overview

We Are Completely Full!

- All **in-person** sections are at capacity.
  - We are looking at opening two more
  - But there are no promises at all right now
- All **online** sections are completely full
  - The number of staff/TAs limits capacity
  - Sized to fit "gallery view" in Zoom
- Right now *freshmen* have priority

About Your Instructor: Walker White

- **Director**: GDIAC
  - **G**ame **D**esign **I**nitiative **at C**ornell
  - Teach game design
- (and CS 1110 in fall)

About Your Instructor: K-Y. Daisy Fan

Background in Environmental Engineering Systems

Also teaching CS1112 Intro to Computing Using MATLAB. Sometimes a SYSEN Optimization course.

Optimization: what is the "best" way to operate a system given constraints and uncertainties?

Source: energy.gov

CS 1110 Fall 2020

- **Outcomes:**
  - **Fluency** in (Python) procedural programming
    - Usage of assignments, conditionals, and loops
    - Ability read and test programs from specifications
  - **Competency** in object-oriented programming
    - Ability to recognize and use objects and classes
  - **Knowledge** of searching and sorting algorithms
    - Knowledge of basics of vector computation
- **Website:**
  - www.cs.cornell.edu/courses/cs1110/2020fa/

Intro Programming Classes Compared

CS 1110: **Python**

- No prior programming experience necessary
- **No calculus**
- *Slight* focus on
  - **Software engineering**
  - **Application design**

CS 1112: **Matlab**

- No prior programming experience necessary
- **One semester of calculus**
- *Slight* focus on
  - **Scientific computation**
  - **Engineering applications**

But either course serves as
a pre-requisite to CS 2110

CS 1133: Short Course in Python

- 2-credit course in how to use Python
  - Material is roughly the first half of CS 1110
  - Most of the Python of 1110, but not theory
  - Two assignments; no exams
  - No experience required
- This is the only way to take Python S/U
  - CS 1110 is no longer offered S/U
  - Best for students that just want Python

Why Programming in **Python?**

- Python is **easier for beginners**
  - ▪ A lot less to learn before you start "doing"
  - ▪ Designed with "rapid prototyping" in mind
- Python is **more relevant to non-CS majors**
  - ▪ NumPy and SciPy heavily used by scientists
- Python is a more **modern language**
  - ▪ Popular for web applications (e.g. Facebook apps)
  - ▪ Also applicable to mobile app development

Class Structure (In a COVID World)

- **Lectures.** All available *asynchronously* online
  - In short(ish) segments for you to view a leisure
  - Audio is a little loud – still trying to get editing right
- **Zoom.** Held *synchronously* at lecture time
  - Will not introduce (much) new material
  - Interactive sessions to help understand videos
  - Q&A, polling, but very ad-libbed
  - **Not mandatory**. You do not have to attend

Class Structure (In a COVID World)

- **Section/labs.** Online (Zoom) or In-Person
  - ▪ Guided exercises with TAs/consultants helping out
  - ▪ Enter into the online lab server
  - ▪ But we will discuss exercises in class
- Attendance policies vary by section
  - ▪ In-person sections are **mandatory**
  - ▪ Online sections are **semi-mandatory**
  - ▪ Attendance required for **manual-graded** questions

Class Structure (In a COVID World)

- **Section/labs.** Online (Zoom) or In-Person
  - Guided exercises with TAs/consultants helping out

This semester, sections meet twice weekly

- We are not giving you extra work

- Same amount of work spread over two days

  - Online sections are **semi-mandatory**
  - Attendance required for **manual-graded** questions

Class Materials

- **Python.** Necessary to use your own computer
  - We are using Anaconda Python 3.7.6
  - Older versions are problem on Catalina
  - New versions are unstable
  - See course website for how to install
- *Optional* **Textbook.** *Think Python, 2ⁿᵈ Ed.*
  - Never used in class; only as a reference
  - Available for free as PDF or eBook
  - Hardbound copies only available online
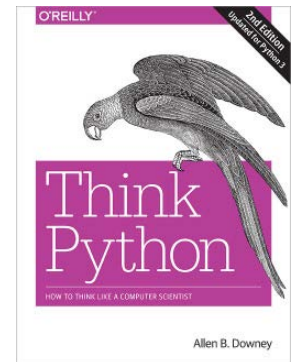
This Course is OS Agnostic

Windows 10

macOS 10.12 or higher

macOS
Sierra

Do NOT Even THINK It!

Do NOT Even THINK It!

Let's Do a Survey

- What type of computer will use for this course?

  A. I want to use my own Windows computer
  B. I want to use my own Macintosh computer
  C. I want to use my own Linux computer
  D. Can I use a ChromeBook?
  E. I will use whatever I can get my hands on

Things to Do Before Next Class

- Visit the course website:
  - www.cs.cornell.edu/courses/cs1110/2020fa/
  - This IS the course syllabus, updated regularly
- Read **Get Started**
  - Enroll in Piazza
  - Sign into CMS and complete **Survey 0**
  - Install Python and complete **Lab 0**
  - Take the academic integrity quiz

Academic Integrity

- Every semester we have cases of *plagiarism*
  - Claiming the work of others as your own
  - This is an **Academic Integrity violation**

- This course has a very specific policy
  - Do not listen to (non-staff) upperclassmen
  - Look at the course website for the new details

- Complete Academic Integrity Quiz on CMS
  - Must complete successfully to stay in class

Grades this Semester

Exams	50%
Prelim 1	25%
Prelim 2	25%
Assignments	**48%**
Assignment 1	3%
Assignment 2	3%
Assignment 3	4%
Assignment 4	7%
Assignment 5	3%
Assignment 6	8%
Assignment 7	**20%**
Surveys	**2%**

Our "final" exam

Some Words About About Grades

- This class is ***not*** curved (in traditional sense)
  - Curve = competition with other students
  - This is about material, not your classmates
- The grades mean something
  - **A**: mastered material; can be a consultant
  - **B**: good at material; can take 2110 (or major)
  - **C**: future CS courses are not a good idea
  - **D**: where did you go?
  - **F**: were you ever here?

Some Words About About Grades

- But this is **not** a weed-out course
  - We know students have different backgrounds
  - Students can do well regardless of experience
- But you may have to work hard!
  - If no experience, budget 10-12 hours of homework a week

	A	B	C	D/F	
All Students	**40%**	**40%**	**18%**	**2%**	
Some Experience	37%	41%	20%	2%	**42%**
No Experience	32%	42%	24%	2%	**28%**

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No Experience	32%	42%	24%	2%	**28%**
Freshmen, No Exp	**37%**	**39%**	24%	**0%**	

Questions?