

CS103 Introduction to Computation (new in Fall 2016)

Do you want to explore a precise, playful, powerful way of thinking?
Do you like to solve problems?
Do you want to learn Python?
Have you ever wanted to work at Apple, Facebook, Regions, or Pixar?
Do you want to speak the language of computation?

Then CS103 is the course for you.

In Fall 2016, we are excited to introduce a new entry point to computer science, the freshman course CS103 Introduction to Computation. For majors and non-majors alike, 103 is a course about computational thinking. It uses the programming language Python, which quickly allows you to explore ideas. Computer science departments across the country agree that Python is the best introductory language to learn coding: it is used in the introductory courses of 8 of the top 10 CS departments, including MIT, Carnegie Mellon, and Cornell.

We believe that every student should learn how to code. Code is not just for working with numbers, but with text, with images, in short with ideas. Since coding teaches you how to express ideas clearly and unambiguously, every discipline now uses computation: from art to physics, music to medicine.

Come explore computation with us in CS103.

Lecture Time: Tuesday/Thursday 9:30-10:45am (+ lab)
Professor: John K. Johnstone, PhD
Prerequisites: a curious mind and an enthusiasm for learning a new language

```
jj ~/Software/code/python more ends_in_ed.py

import sys
fname = sys.argv[1]
for line in open(fname):
    for word in line.split():
        if word.endswith('ed'):
            print word

jj ~/Software/code/python python ends_in_ed.py frost_the_road_not_taken.txt
diverged
looked
wanted
doubted
diverged
traveled
jj ~/Software/code/python more fib.py

def fib(n):
    a,b = 0,1
    while a<n:
        print a,
        a,b = b,a+b

jj ~/Software/code/python python
Enthought Canopy Python 2.7.9 | 64-bit | (default, Jun 30 2015, 19:41:21)
[GCC 4.2.1 (Based on Apple Inc. build 5658) (LLVM build 2335.6)] on darwin
Type "help", "copyright", "credits" or "license" for more information.
>>> execfile('fib.py')
>>> fib(1000)
0 1 1 2 3 5 8 13 21 34 55 89 144 233 377 610 987
```

