



Beginner Python

Goal: Master the basics of Python by working our way up to building a cool visual interactive sand interface. The classes will be a mixture of lectures and interactive problem solving / programming to master foundational Python concepts.

We will model it after this program:

<http://web.stanford.edu/class/cs106a/asn/sand-handout.html>

1. Control flow, decomposition, variables
  - a. 30 min intro and install Pycharm
  - b. 15 min work time on section handout (short practice problems on the lecture topic)
  - c. 30 min go over section problems and to answer questions
2. Arithmetic expressions, functions and parameters
  - a. 45 min lecture
  - b. 15 min work time on section handout (short practice problems on the lecture topic)
  - c. 30 min go over section problems and to answer questions
3. Lists and images
  - a. 45 min lecture
  - b. 15 min work time on section handout (short practice problems on the lecture topic)
  - c. 30 min go over section problems and to answer questions
4. Graphics and animation
  - a. 45 min lecture
  - b. 15 min work time on section handout (short practice problems on the lecture topic)
  - c. 30 min go over section problems and to answer questions
5. Mastering the basics to building sand -- “warmup programs”
  - a. 15 min introduce the programs

