

## Python Skills Workshop Agenda

Morning			
<i>Time</i>	9:00 – 9:25	9:30 – 10:55	11:00 – 12:30
<i>Topic</i>	Session 0 Introduction	Session 1 Code - Part 1	Session 2 Code – Part 2
Afternoon			
<i>Time</i>	12:30 – 1:30	1:30 – 2:55	3:00 – 4:30
<i>Topic</i>	Lunch	Session 3 Basic Statistical Analysis	Session 4 Web Scraping & Github

### Session 0: Introduction

Length: 25 minutes

Topics covered:

- What is Python, what can we do with it, and why is it an important language to learn?
- Installing Python and becoming familiar with the GUI
- Simple calculations in Python's shell
- Exercise 0: Addition, subtraction, multiplication, division, squares, and square roots

### Session 1: Reading and Writing Code – Part 1

Length: 1.5 hrs

Topics covered:

- Variables types in the real world and Python
- General and Python-specific coding rules and conventions
- Exercise 1: Creating a script to calculating diving times and converting distances

### Session 2: Reading and Writing Code – Part 2

Length: 1.5 hrs

Topics covered:

- Logical operations (if, else, etc.) and while loops
- Data structures – lists, dictionaries, and creating your own class – and for loops
- Exercise 2: Importing two datasets with different variables, merge two datasets together

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### Session 3: Basic Statistical Analysis

Length: 1.5 hrs

Topics covered:

- Variable distributions
- Basic Visualizations (bubble plot, box plot)
- Correlations
- Regression methods basics (brief overview)
- OLS (brief overview) and logit (brief overview)
- Exercise 3: Create a script to describe and visualize the data from Exercise 2 and run logit regression

### Session 4: Web Scraping Familiarization

Length: 1.5 hrs

Topics covered:

- Web scraping overview
- Github overview
- Publish/represent work online
- Discussion of free Python learning resources
- Wrap-up discussion