Python Minicourse

Spring 2022

Instructor:	Joe Seidel	**Time:**	Friday 10:30a-11:30a
Email:	joeseid@iu.edu	**Place:**	Zoom

Description: This course will introduce students to the Python programming language in the context of a career in data and analytics. Note however, this is not a course on statistics or economics, it is one on how to get things done using Python.

Course Objectives: The primary objective of this course is to develop a level of competency in Python that will allow you to credibly list Python as a skill on your resume or CV. My wishlist for you (in no particular order):

1. Become familiar with relevant libraries: pandas, matplotlib, scikit, etc

2. Make python your first choice for data wrangling and manipulation.

3. Discover the value of organizing your projects with git repositories.

4. Have this be the last python course you ever take!

Course Materials: This course will be taught using a combination of note prepared by me and open source materials. Notes and links to resources wills be accessible via github.

- github.com/seidelj/python-course

Course Organization: On the first ten Fridays of the semester, we will meet in a lecture/workshop format —be prepared to write code in class (the first class will cover installing the general python environment). While there are no formal requirements, you should plan to attend each meeting in order to fulfill the course's primary objective. I will provide supplemental material and exercises throughout the course, but my goal is to keep the commitment to the one hour we meet each week.

Topics (Tentative)

- Jupyter notebooks

- Github repositories

- Working with python packages/libraries

- Virtual environments

- Reading and writing data

- Basic data manipulation

- Advanced data manipulation

- Plots

- Webscraping

- Machine learning (scikit-learn, h2o)

- Surveys and experiments (oTree)

- Websites

Depending on interest, ability, ambition etc., the topic list may be adjusted. The most recent version of the syllabus will be available through the github site.