

# Data and Programming for Public Policy I – Python

## PPHA 30537 Spring 2024

Section 1: MW 9am-10:20am at Keller 1022

Section 2: MW 10:30am-11:50am at Keller 1022

Section 3 and Section 4 are taught independently by Prof Levy

## Information

### Instructor

Navin Kumar (navinkumar@uchicago.edu)

*Office hours:* MW 1:30pm – 2:30pm at Keller 2081 (second floor, east wall.) Students must sign up via [Calendly](#).

### Background and Goals

Python is one of the most popular programming languages in the world. It is free, powerful, flexible, and easy to learn. This course teaches the basics of programming in Python and dives deep into the packages that allow users to analyze data. It is geared towards public policy students that have no prior coding experience.

### Prerequisites

None

### Relationship to other programs

Part of the Data Analytics certification

### How this class will work

This class will use a “flipped classroom” model to deliver content

- New content will be delivered in the form of short, asynchronous **lectures** posted on Canvas. I will aim to keep these below 30 minutes in length. They will be made available at noon on the day before scheduled class time. (Mandatory)
- Scheduled lecture times will be used as **live labs** – replacing the traditional TA sessions – where we will practice coding by working through examples in groups. (Mandatory)
- Weekly **office hours** with the professor and TAs where students can get one-on-one help with their problems. (Optional)
- A **discussion board** for questions and discussions outside of office hours and class. (Optional)

### Teaching assistant(s)

TBD

## Evaluation

Students will be evaluated via 4 major methods:

1. **In class quizzes (10%)** at the start of each class to check that you've watched the lecture and have acquired the skills necessary for participation in that day's class. Quizzes can only be completed in class. Your two lowest scores will be dropped to account for illnesses etc.
2. **In class assignments (10%)** Starting in week 2, there will be deliverables from projects that will be done in class. Projects will be done in groups, and will be graded on completion. As with quizzes, your two lowest scores will be dropped.
3. **Home assignments (60%)** will be coding assignments that ask you to use concepts you've learned in class to solve programming questions. When possible, these will mimic real-world research problems.
4. **A final exam (20%)** will cover all material taught during the quarter. This is new, and implemented in light of widespread adoption of ChatGPT.

This class requires 60% or more to pass. Grades will *not* be curved. Scores will be assigned thus:

95-100	90-94.99	85-89.99	80-84.99	60-79.99
A	A-	B+	B	B-

### Home assignments

Below are the list of home assignments, the dates they will be available, and the dates they are due:

Name	Dates
Homework 1	TBD
Homework 2	TBD
Homework 3	TBD
Homework 4	TBD

**Regrade requests** must be submitted on Gradescope with a (polite) explanation, which will then be re-evaluated by the original grader. Disagreements may escalate to the head TA and (eventually) the instructor. All requests may result in full regrade and a higher or lower score.

Every student has **four 12-hour late tokens** available to them during the quarter. Those extensions will be automatically applied to any late home assignments and require no excuse to be given. These extensions are used in complete blocks of time – e.g. turning in an assignment 12 hours and 30 minutes late will use two tokens. Once your late tokens are used up for the quarter, all assignments will be penalized at a rate of 5% per 12-hour block.

These tokens are intended to cover ordinary illness, family events, and so on – only issues of sufficient magnitude that academic affairs is involved in the discussion can qualify for exceptions. Once solutions have been posted to the class, no further assignments may be turned in.

## Schedule

Week	Date	Topic
1	Mar 18	Introduction, software, setup
	20	Setup, GitHub basics
2	25	Data types
	27	Loops and logic
3	April 1	Functions I
	3	Functions II
4	8	Pandas I
	10	Pandas II
5	15	Pandas III
	17	Pandas IV
6	22	Visualization I
	24	Visualization II
7	29	Applications I
	May 1	Applications II
8	6	APIs and Web-scraping I
	8	APIs and Web-scraping II
9	13	Other advanced topics I
	15	Other advanced topics II
	TBD	Final Exam

## General Resources Available to Students

Include any texts and links as desired:

- [Harris Academic Support Programs and Handbook](#)
- [Student Wellness](#)

- [University Learning Resources](#)

## **Harris School and University of Chicago Policies**

Include any text and links as desired to highlight or emphasize issues related to academic integrity, disability accommodations, diversity and inclusion, and video and audio recordings.

- [Harris School Policies](#)
- [University General Policies](#)
- [University Academic Policies](#)
- Policies on audio and video [recordings](#) and [deletion](#).