

PPD 534

# Data, Evidence, and Communication for the Public Good

Course Promo

**USC PPD 534 / Fall 2022 / 4 units**

*Thursday evenings, 6:00-9:20PM in person*

## **COURSE DESCRIPTION**

This course provides you with a toolkit for telling stories with urban data. It will introduce basic skills in coding, quantitative analysis, reasoning with evidence, and communication of findings. The course takes a computational social science approach to working with data. It uses Python to introduce coding and statistical methods that students can reproduce and dissect in real-time in the classroom.

We start the semester with the basics of coding, then move on to data loading and analysis, then on to basic statistics, then hypotheses and research methodologies, and finally a critical assessment of smart cities and urban informatics. Much like learning Python itself, this course may start out difficult but gradually become more intuitive.

Each week, students will be expected to:

- › Complete and be prepared to discuss all assigned readings
- › Complete and submit any assigned reading responses
- › Attend the lecture (*once weekly on Thursday evenings*)
- › Complete and submit any assigned projects

The course has no specific prerequisites. Coding itself will be taught from the ground up. Similarly, we will cover quantitative research and basic geospatial analysis from a beginner to intermediate level. However, this course requires patience and practice. Learning to code and grapple with quantitative data will take lots of trial-and-error discovery, self-direction, repetition, and experimentation on your part. You will get out of it what you are willing to put into it. By the end of the course, you will *learn a new way of learning* that will serve you for your entire future career.

## LEARNING OBJECTIVES

- › Write simple code to reformat, analyze, and visualize urban data
- › Understand how to use basic descriptive and inferential statistics to evaluate and interpret social science evidence
- › Tell stories about public issues with a combination of text and visuals using data and evidence
- › Evaluate the politics and ethics underlying how technology and innovation impact cities and planning processes

## MATERIALS

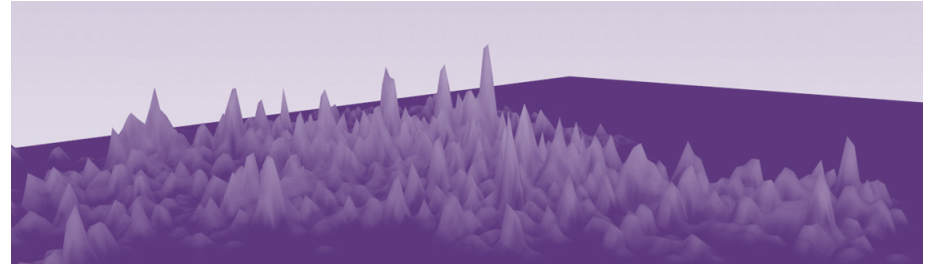
Coursework will be based on free open-source software and publicly-accessible data. The goal is that everything you will learn in this course may be repeatable throughout your future career without the need for a paid subscription to specific software.

Course reading materials are available via Blackboard for enrolled students to download. The course lectures assume that you have read the assigned readings prior to each class session and are reasonably fluent in their contents and ready to discuss/debate them in class. Lectures are supplemental to the assigned reading and are of little value if you haven't taken the time to prepare in advance. So, before class, make sure you have completed the reading, taken thorough notes, and prepared any questions you may have about the material.

## ASSIGNMENTS

Per USC guidelines, for each course unit the university expects 2 hours of out-of-class student work per week. This is a 4 unit course. Therefore, you should expect an average of 8 hours of out-of-class work each week; please budget your time accordingly. The balance will vary from week to week, but will comprise a mix of reading, prose writing, and scriptwriting assignments. Active participation is expected (and graded) in the classroom.

Group exercises leverage your diversity of skills and life experiences. We expect each of you to contribute to your group assignments in whatever way you can create proportional value: some will be better at code, others at writing, others at visual communication, etc.



## EQUIPMENT & PREPARING FOR THE FIRST CLASS

If you have a personal laptop, make sure to bring it to each class. The softwares we will be using are compatible with Windows, macOS, and Linux/UNIX. Having a laptop on-hand will be important for the installations covered in the first lecture.

If you don't have a personal laptop and don't plan to purchase one before the Fall 2022 semester: don't feel obligated to purchase one solely for this class! [Google Colab](#) would allow you to complete most assignments for this course at the [USC Computing Centers](#) and [USC Libraries](#).

## ACCOMMODATIONS

Any student requesting special academic accommodations is required to register with the [Office of Student Accessibility Services \(OSAS\)](#) each semester. A letter of verification for approved accommodations can be obtained from OSAS. Please be sure the letter is delivered to the instructor as early in the semester as possible, as the accommodation can only be implemented upon receipt of the letter. For further support, contact USC Support and Advocacy ([uscsupport@usc.edu](mailto:uscsupport@usc.edu)).