UCLA Department of Economics
Econ 10P: Introduction to Python for Economists

Syllabus

Instructor: Dr. Randall R. Rojas
Office: Bunche 8248
Office Hour: Thursday, 12:30-1:30PM via Zoom
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Time and Location
4:00PM - 6:00PM (PST), Mon -Thur. Remote via Zoom

Course Description
Introduction Python with a focus on data analysis through a hands on approach. The data and examples will mainly come from finance and economics.

Textbooks

1. Python for Data Analysis. Wes McKinney. O'Reilly (3rd Ed.) (Link)

2. Introduction to Python for Econometrics, Statistics and Data Analysis. (2020, 4th Ed.) K. Sheppard (Link)

Computation of Course Grade

- 5% Attendance

- 15% Midterm Exam (July 21$^{\text{st}}$)

- 25% Project/Presentation 1 (July 23 − 24)

- 25% Project/Presentation 2 (July 29 − 30)

- 30% Final Exam (Cumulative, August 1$^{\text{st}}$)

Student Learning Outcomes

- Learn the fundamentals of programming in Python.

- Understand how to manipulate and analyze different data structures such as dictionaries and lists.

- Understand how to construct algorithms that use loops and functions for streamlining repetitive tasks.

- Perform basic data analysis tasks applied to financial data/

Disabled Students and the Center for Accessible Education (CAE)

Any student with a preexisting illness or condition who requests special arrangements must (a) qualify under CAE rules for such special arrangements and (b) must take the exam with CAE. Any such arrangements with CAE must be made the first week of classes. The instructor must be informed of any such arrangement in the first week of classes. For additional information and the qualification conditions of the Center for Accessible Education, please visit their website at http://www.cae.ucla.edu/. All other students must take the exam at the scheduled time under the same time constraints. It is the responsibility of all students who request special arrangements with CAE to be familiar with all of their rules as well as the rules of this class.

Tentative Course Schedule

Day	Lecture Topics	Chapters
Week I		
Finance Topics: Time Value of Money & Modern Portfolio Theory		
1 (July 14)	Introduction, Data Types, Flow Control & Loops	2^a, Lecture nontes
2 (July 15)	Lists, Dictionaries & Functions	3^a
3 (July 16)	File Operations, Recursion, and Modules	6^a
4 (July 17)	Classes, Objects, and Methods	14^a, 15^a
Week II		
Finance Topics: Modern Portfolio Theory & CAPM		
5 (July 21)	**Midterm Exam**	
6 (July 22)	Numerical Programming (`NumPy`)	4^a
7 (July 23)	Data Manipulation (`pandas`)	5^a, 6^a, 7^a
	Project 1 due on July 23/24	
8 (July 24)	Data Manipulation (`pandas`) -continued	5^a, 6^a, 7^a
Week III		
Finance Topics: Stock Price Modeling & Options Pricing		
9 (Jul 28)	Plotting & Visualization	9^a
10 (Jul 29)	Data Analysis Application 1	Lecture Notes
	Project 2 due on July 29/30	
11 (Jul 30)	Data Analysis Application 2	Lecture Notes
11 (Jul 31)	**PLF Review Session**	
12 (Aug 1)	**Final Exam (Friday, Aug 1)**	

[a]Python for Data Analysis. Wes McKinney. O'Reilly (2nd Ed.)