DATA 88 Syllabus - Spring 2020

https://ds-connectors.github.io/econ-sp20/

1 Course Overview

The idea for the class is to take students through a series of exercises to motivate and illustrate key concepts in economics with examples in Python Jupyter notebooks. The class will cover concepts from Introductory Economics, Microeconomic Theory, Econometrics, Development Economics, Macroeconomics, and Public Economics. The course will give data science students a pathway to apply Python programming and data science concepts within the discipline of economics. The course will also give economics students a pathway to apply programming to reinforce fundamental concepts and to advance the level of study in upper division coursework and possible thesis work.

1.1 Course Objectives

- Examine economics concepts through real-world data using data science methods

- Showcase applications from topics in the fields of economics

- Motivate basics of econometrics from a data science perspective

- Prepare students for upper division economics coursework and research with technical skills such as LaTeX, APIs, empirical analysis, and more.

1.2 Course Website and Schedule

The most updated course calendar can be found on the course website (see title). Please refer to the webpage for all assignment due dates and links, readings, and policies.

2 Prerequisites

You must have taken Data 8 or be currently enrolled in Data 8 to take this course. That being said, we are able to make exceptions if you have prior programming or data science experience; please email Professor Van Dusen if you have any questions. Prior economics knowledge may be helpful but is not necessary.

3 Course Instructors

Eric Van Dusen (ericvd@berkeley.edu) is the Director of Curriculum at the Division of Data Sciences, helping to develop Data Science curriculum across campus. He has worked at UC Berkeley as the Innovation Director at the Blum Center and as an academic researcher at the Center for the Evaluation of Global Action (CEGA). He has taught as a lecturer for EEP 1 and IAS 106, developing original curriculum in introductory economics. In Fall 2017 he developed and taught an original Data Science Connector class on Economic Development, focusing on technology adoption and public health. In Spring 2019 he co-developed a course on Reproducibility and Open Science. This is his second time teaching Data 88.

You can also reach out to the other members of the course staff:

- Alan Liang: alanliang@berkeley.edu

- Amal Bhatnagar: amalbhatnagar@berkeley.edu

- Andrei Caprau: acaprau@berkeley.edu

- Chris Pyles: cpyles@berkeley.edu

- Shashank Dalmia: shashankdalmia24@berkeley.edu

- Umar Maniku: manikui@berkeley.edu

4 Grading

Your grade will be determined as follows. Every assignment is weighted equally in its category, except for the tests:

- Labs (12): 15%

- Homeworks (6): 30%

- Tests (2): 25%

- Projects (3): 30%

Within the tests category, the test on which you score higher will be weighted at 15% and the lower at 10%.

4.1 Extra Credit

There will be extra credit opportunities throughout the semester will each be worth an additional 1% on top of your grade. These assignments will involve thoughtful reflection on some reading, podcast, etc given out each week in about 500 words. This can be done three times during the semester, for a total of 3% extra credit. Grading these assignments and the credit earned is at the discretion of the instructors. These will be due on Monday, April 27.

4.2 Late Policy & Regrades

Students are allowed to submit assignments late for a 50% penalty until Friday at 11:59 PM, after which they will receive no credit. Scores for assignments will be released Monday nights and the corresponding regrade requests will be due on Wednesdays at 11:59 PM for all assignments. When submitting a regrade request, please include a short explanation of why the grading was incorrect. We will not be adjusting the rubric for regrades and reserve the right to regrade an entire assignment if a regrade is requested.

4.3 Attendance

Attendance is imperative to succeeding in the course. As a result, attendance will play a significant role in the determination of your grade:

- In order to receive an A- or above, you must have attended at least 10 lectures. This is a necessary *but not sufficient* condition for an A.

- In order to receive a B- or above, you must have attended at least 8 lectures. This is a necessary *but not sufficient* condition for a B.

- In order to pass, you must have attended at least 7 lectures. This is a necessary *but not sufficient* condition for passing.

That being said, we understand that there are circumstances in which you may miss a considerable number of classes. If you expect this to happen, please email the professor as soon as possible.

5 Course Infrastructure and Support

You are not alone in this course; the staff and instructors are here to support you as you learn the material. It's expected that some aspects of the course will take time to master, and the best way to master challenging material is to ask questions.

5.1 Piazza

For online questions, use Piazza. If you have any conceptual questions or questions regarding assignments, please post them on Piazza. Piazza allows us all to respond in a timely manner and avoids duplicate questions.

5.2 Gradescope

You will submit all your assignments through Gradescope. Assignments will be due Mondays at 11:59 PM.

5.3 Office Hours

Professor Office Hours: *Thursdays 11-12, Hearst Field Annex B64*
Course Staff Office Hours: *Fridays 11-1, Evans B3A*, or by appointment

6 Limits to Confidentiality

As UC employees, all course instructors and tutors are "Responsible Employees" and are required to report incidents of sexual violence, sexual harassment, or other conduct prohibited by university policy to the Title IX officer. We cannot keep reports of sexual harassment or sexual violence confidential, but the Title IX officer will consider requests for confidentiality.

7 Electronics Policy

Please silence your cell phones during class. You are free to use a tablet to take notes, as long as it's laid flat on your desk. Laptops should not be used during the lecture portion but are encouraged during the lab portion.

8 Special Accommodations

If you need disability-related accommodations in this class, if you have emergency medical information you wish to share with me, or if you need special arrangements in case the building needs to be evacuated, please inform me immediately in private, after class or during my office hours. For more information on services available to student with disabilities, please visit the website or office of the Disabled Students' Program: http://dsp.berkeley.edu/

9 Learning Cooperatively and Academic Honesty

We encourage you to discuss course content with your friends and classmates as you are working on your weekly assignments. No matter what your academic background, you will definitely learn more in this class if you work with others than if you do not. Ask questions, answer questions, and share ideas liberally.

You must write your answers in your own words, and you must not share your completed work. You are also not permitted to turn in answers or code that you have obtained from others. Not only is such copying dishonest, it misses the point of the assignments, which is not for you to find the answers somewhere and send them along to the staff. It is for you to figure out how to solve the problems, with the support

available in the course.

Make a serious attempt at every assignment yourself. If you get stuck, read the supporting code and lab discussion. After that, go ahead and discuss any remaining doubts with others, especially the course staff. That way you will get the most out of the discussion.

Please read Berkeley's Code of Conduct carefully. Penalties for cheating at UC Berkeley are severe and include reporting to the Center for Student Conduct. They might also include a F in the course or even dismissal from the university. It's just not worth it.