Economics Winter 2020

## Econometrics 120C

Team Contact

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## 1 Organization

**Disclaimer:** The information below reflects the official schedule of classes as of January 5, 2020. Please check the schedule for updates.

### 1.1 Class

Section A: Monday/Wednesday/Friday, 10:00am – 10:50am in CENTR 113 Section B: Monday/Wednesday/Friday, 11:00am – 11:50am in CENTR 113

### 1.2 Discussion sessions

### Section A:

- 1. Monday, 4:00pm 4:50pm in PETER 104
- 2. Monday, 5:00pm 5:50pm in PETER 104

### Section B:

- 1. Friday, 4:00pm 4:50pm in PETER 104
- 2. Friday, 5:00pm 5:50pm in PETER 104

There are no discussion sessions during the first week.

#### 1.3 PSET lab

There will be a Problem Solving and Economics Tutoring (PSET) lab. The TAs will hold their office hours in the PSET lab. More information can be found here.

#### 1.4 Office hours

Wednesday afternoon, 4:00pm – 6:00pm in ECON 216

### 2 Overview

ECON120C is the third course in the core econometrics sequence. We will study a variety of econometric techniques that are widely applied in business, finance, public policy, and other areas. Throughout, we will focus on both understanding and doing. The understanding will come from lectures, class discussions, and problem solving. The doing will come from statistical software use.

## 3 Topics

- 1. Introduction
- 2. OLS Asymptotics
- 3. Correlation and Causality
- 4. Instrumental Variables Methods
- 5. Panel Data Methods
- 6. Potential Outcomes, Experiments, and Quasi-Experiments
- 7. Binary Dependent Variable and/or Time Series Analysis (time permitting)

# 4 Prerequisites

ECON120C is the sequel to ECON120B. You are expected to have a thorough grasp of the material covered in that course; namely, the linear regression model. In addition, you are expected to be familiar with basic statistics and probability, and to have mastered single and multivariable calculus. If you did not learn or do not remember the material covered in the required MATH10 or MATH20 sequence, you will find this course extremely difficult.

### 5 Textbook

The required textbook for this class is *Introduction to Econometrics* (3rd Ed), by James Stock and Mark Watson. The book will be available as an eBook through Canvas. Note that the lectures will also cover additional material not found in the textbook.

Your digital course materials are provided by the UC San Diego Bookstore through Canvas and are free for the first two weeks of classes. After two weeks, your student account will be charged a special reduced price unless you opt out. If you decide to opt out you must complete the process by Saturday, **January 18th 2020** and you will be responsible for sourcing the materials elsewhere.

For any questions about billing please contact textbooks@ucsd.edu.

For any questions about using your eBook please reference RedShelf Solve.

To opt-out:

- Click the RedShelf link in Canvas
- Click View Course Materials
- Scroll down to the grey opt-out button and follow the prompts

You will have until **Saturday**, **January 18th 2020** to complete this process and you will be responsible for getting access to the materials elsewhere.

## 6 Econometrics video handbook

You will have access to the Econometrics Video Handbook (EVH) through Canvas. The EVH contains a set of videos on key concepts that we discuss in 120C, and also allows you to review the material discussed in 120A and 120B.

### 7 Software

You will have to use the statistical software package STATA to solve assignments. You can download STATA via Canvas.

# 8 Webpage

All the material as well as the problem sets will be available on Canvas.

# 9 Questions

To improve fairness, quality, and efficiency, we will strictly enforce the following policy regarding questions related to the course material:

- We will **not** answer any questions related to the course material via email.
- We are available for questions before, during and after class, during office hours, and discussion sessions.
- There is an online discussion board on Canvas where you can post all your questions. We will check the discussion board regularly and answer your questions.

### 10 Assessment

The assessment has the following components:

- Midterm exam (20%): 02/14/2020, Friday 6:00pm 7:20pm in PCYNH 106 (Section A) and PCYNH 109 (Section B)
- 2 STATA assignment (10% each): TBA in class and on Canvas
- Final exam (60%): 03/14/2020, Saturday 3:00pm 5:59pm, room TBA

There will be no make-up exams. The exception is absence from the final examination for medical reasons, in which case a doctors certificate is required. The final exam covers all the material of the course.

If you miss the midterm for a verifiable medical/legal/sports reason, I will increase the contribution of the final to 80%. Failure to notify me promptly that you must miss the midterm will result in a zero grade for the midterm. Unexcused absences will also result in a zero.

### 11 Examinations

There will be a mid-term exam, carrying a weight of 20%. The cumulative final exam, covering all the material of the course, will have a 60% weight. All exams will be closed book, but you can bring a copy of the official cheatsheet (TBA on Canvas). Bring a calculator (just a simple one will do, no need for scientific or business calculators).

# 12 Grading policy

We will use Gradescope to grade exams and manage regrade requests.

The STATA assignments will be graded on three scales: 0%, 50%, and 100%. If your do-file does not run, we will subtract 25%.

The course grade will be assigned as follows. First, the weighted average of numerical scores will be obtained. Suppose your scores on the STATA assignments are 100 and 50. Your midterm and final exam scores are 80 and 85, respectively. Then the weighted average is:

$$100 \cdot 0.1 + 50 \cdot 0.1 + 80 \cdot 0.2 + 85 \cdot 0.6 = 82$$

The final letter grade is assigned based on your weighted average. Below you can find a tentative grading scale.

$\geq 95$	A+
[90, 95)	A
[85, 90)	A-
[80, 85)	B+
[75, 80)	В
[70, 75)	В-
[65, 70)	C+
[60, 65)	$\mathbf{C}$
[55, 60)	С-
[50, 55)	D
< 50	F

**Important:** This is not the final scale and I reserve the right to modify it. As a result, this scale may differ from the actual final scale.

# 13 Other

Disabilities will be accommodated. Please refer to OSD policy on what we do to help.