University of Southern California
Economics Department
Spring 2017

ECON 419: Advanced Econometrics
Instructor: Juan Esteban Saavedra (juansaav@usc.edu)

Class Meetings: Tuesdays and Thursdays, 4:00pm-5:50pm, KAP 158
Office Hours: Tuesdays, 2:30PM-4:00PM or by appointment, VPD 314-J

Description: Intended as a continuation of ECON 318 (Introduction to Econometrics), this course focuses on developing the theoretical basis and practical application of the most common tools of empirical analysis. Foundations of analysis will be coupled with hands-on examples and assignments involving the analysis of data sets.

Prerequisites: This course is primarily designed for undergraduate Economics students who have already taken microeconomic theory, introductory statistics, introductory econometrics and calculus courses.

Readings: The course material is self contained and there is no required textbook for the course. Class slides covering the material will be posted on the course website. Some students might find it useful to have a textbook as an additional reference. Good reference books are (in alphabetical order):

Angrist, J. and Pischke, J.S. Mostly Harmless Econometrics, Princeton, 2009
Stock, J. and Watson, M. Introduction to Econometrics, 2nd Edition Alison-Wesley, 2007
Wooldridge, J. Econometrics of Cross Section and Panel Data, MIT, 2002

Assignments: Homework assignments must be handed in before class on the day they are due. Late assignments will be marked down. Students are encouraged to work in small groups; the maximum group size is 3 for all assignments. Each student must write up her or his answers separately. Please append your "log" files to your assignments when appropriate. The data for the assignments will be available in the course web page in STATA format. Students are strongly encouraged to use STATA in all assignments.

Code of Conduct: All course activities, including class meetings, homework assignments, and exams, are subject to the USC code of conduct. In addition, students may not use cell phones during class-time. Please make sure that your cell phone is disconnected during class time.

Grading: The final grade will consist of the homework assignments, the midterm exam, the class project and the final exam, with the following weights:
Homework Assignments: 15%
Midterm Exam (March 5): 25%
Final Exam (TBD): 30%
Class Project (Due last day of class): 30%

Completing and submitting all homework assignments (by their due date) and exams is required to pass this course. There will be six homework assignments with due dates: Jan 26, Feb 16, March 7, March 23, April 11, April 25.

ECON 419 Schedule

Jan. 10 Introduction. Statistical Prerequisites I
Jan. 12 Statistical Prerequisites II. Regression
Jan. 17 Economic Relationships and Conditional Expectations I
Jan. 19 Economic Relationships and Conditional Expectations II
Jan. 24 Estimation and Inference I
Jan. 26 Estimation and Inference II (HW1 DUE)
Jan. 31 Qualitative and Limited Dependent Variable Models I
Feb. 2 Qualitative and Limited Dependent Variable Models II
Feb. 7 STATA Workshop
Feb. 9 STATA Workshop
Feb. 14 Qualitative and Limited Dependent Variable Models III
Feb. 16 Models of Truncation and Censoring I (HW2 DUE; Topic/question for final
        project due)
Feb. 21 Models of Truncation and Censoring II
Feb. 23 Quantile Regression
Feb. 28 Instrumental Variables I
Mar. 2 **Midterm Exam**
Mar. 7 Instrumental Variables II (HW3 DUE; Potential data sources for final project
due)
Mar. 9 Instrumental Variables III
Mar. 12-19 No Classes (Spring Break)
Mar. 21 Instrumental Variables IV
Mar. 23 Panel Data I (HW4 DUE)
Mar. 28 Panel Data II
Mar. 30 Panel Data III
Apr. 4 Panel Data IV
Apr. 6 Panel Data V
Apr. 11 Difference in Differences I (HW5 DUE; Preliminary results for final project due)
Apr. 13 Difference in Differences I
Apr. 18 Difference in Differences II
Apr. 20 Regression Discontinuity I
Apr. 25 Regression Discontinuity II (HW6 DUE)
Apr. 27 Field Experiments (FINAL PROJECT DUE)