University of California
Department of Economics

Doug Steigerwald

Econometrics
Economics 241B

Course Goals:

To develop procedures used in the empirical implementation and validation of economic relationships, for students familiar with the fundamentals of probability theory and statistical inference as covered in Economics 241A.

Course Structure:

Meetings: MW 2:00-3:15 in North Hall 2212
Course Begins: Wednesday, January 17
Course Concludes: Wednesday, March 14
Final Examination: Monday, March 19 4:00-7:00 p.m.

Requirements:

Analytic and Computational Exercises (20%): Certain classes have analytic exercises to sharpen your skills, and computational exercises (in Matlab) that allow you to develop best practices for the topics covered. You will submit a pdf document containing your answers online, by the date indicated on Gauchospace. Note, the assignments prior to the midterm and final have less than 1 week for completion.

Midterm (30%)

Final Examination or Research Presentation (50%): You have the choice of either a final examination or a research presentation. A research presentation entails study of a methodology question and presentation of the question together with an application, either from your own research or the research of others, and proposed extensions of the research question. To select a research presentation you must have your research topic approved (by me) by the end of the second week of class. Once approved, you will present your findings in a class slot of 30 minutes toward the end of the quarter and turn in a written report of 5 pages, due one week after your presentation.

Readings:

Principal readings come from

B. Hansen, *Econometrics*, online, 2014.

Development of computational skills will be enhanced by reading

A. Cameron and P. Trivedi, *Microeconometrics Using Stata*, Stata, 2009.

Other texts that may provide useful readings

T. Amemiya, *Advanced Econometrics*, Harvard University, 1985.
F. Hayashi, *Econometrics*, Princeton University, 2000.
P. Ruud, *Classical Econometric Theory*, Oxford University, 2000.
J. Wooldridge, *Econometric Analysis of Cross Section and Panel Data*, MIT, 2010.

Access to articles: Most articles are available through the library. To access readings through this link when away from campus, refer to configure to configure your computer.

Schedule of Topics

Several notes:

Wednesday:

Finite-Sample Linear Regression: Algebra of OLS Estimators

Hayashi: 1.1-1.4

Exercise 2 (Analytic and Computational) Exercise 2 Data Set

Charness, G. and P. Kuhn 2007 "Does Pay Inequality Affect Worker Effort? Experimental Evidence" *Journal of Labor Economics* 25, 693-723.

Monday:

Single Equation GMM: Endogeneity Bias EB Background Notes

Wooldridge: 4.3-4.4

Hayashi 3.1-3.3

Ruud: 20.4-20.11

Exercise 7 (Analytic)

Ashenfelter, O. and A. Krueger 1994 "Estimates of the Economic Return to Schooling from a New Sample of Twins" *American Economic Review* 84, 1157-1173.