University of Colorado - Department of Economics
Econ 7828 - Econometrics - Spring 2014
Professor Carlos Martins-Filho

Office. Economics Building 105

Meetings. Tuesdays and Thursdays from 11:00 PM - 12:15 PM in ECON 119.

Office hours. Tuesdays 2:00 PM - 3:30 PM and by appointment. For appointment send an email to carlos.martins@colorado.edu.

Class URL. http://spot.colorado.edu/ martinsc/Econ_7828.html

Prerequesites. ECON 7818 (or equivalent) or consent of instructor.

Objectives. This course is the second semester of your first-year graduate sequence in Econometrics. The first semester covered some fundamental concepts in probability and statistics and introduced you to estimation and tests of hypotheses. In this course our objective is to introduce you to various parametric models of regression. They include the classical linear regression model and associated models that relax several of its constituent assumptions. We will also treat regression models where some or all regressors are \endogenous" as well as models with multiple regressands. Time permitting we will also deal with models for regressands that are either discrete or in some other way limited.

Grades. Your course grade depends on four homework sets, a midterm and a final examination. Relevant dates are given below.

Evaluation	Percentage	Dates
Homework sets	30	announced in class
Midterm examination	30	March 6, in class
Final examination	40	May 5, 4:30 PM - 7:00 PM

Observation. Some of the homework questions will involve the use of data (real and generated). Therefore, a mathematical/statistical software will be needed. We will use MATLAB to implement the various estimation and testing procedures we develop in class. I will not devote any class time to introduce you to MATLAB. You must learn it on your own. However, I will provide several codes that will serve as models.

Textbook.

1. Davidson, R. and J. MacKinnon, D., 2004, Econometric Theory and Methods, Oxford University Press, Oxford.

2. I will distribute class notes. Read them carefully. They reflect my view of what are the most important concepts/theorems we cover in the course.

Support and Reference Books.

A. Mathematics, Probability, Statistics and Asymptotic Theory

1. Apostol, T., 1974, Mathematical Analysis, Addison Wesley, New York.

2. Casella, G. and Berger, R., 2002, Statistical inference, Duxbury, Paci c Grove, CA.
3. Davidson, J., 1994, Stochastic Limit Theory, Oxford University Press, Oxford.
4. Grimmett, G.R. and D.R. Stirzaker, 1992, Probability and Random Processes, Oxford University Press, Oxford.
5. Jacod, J. and P. Protter, 2000, Probability Essentials, Springer, Berlin.

B. Econometrics

1. Davidson, J., 2000, Econometric Theory, Blackwell Publishers, Oxford.[dm]
2. Hansen, B., 2013, Econometrics, unpublished, available at http://www.ssc.wisc.edu/ bhansen/econometrics
3. Schmidt, P., 1976, Econometrics, Marcel-Dekker, New York.

Topics.

1. The classical linear regression model: estimation and testing.
   Nonnormality
   Restricted estimation
   Generalized Least Squares (GLS) and Feasible Generalized Least Squares (FGLS)
2. Endogeneity
   Instrumental variable (IV) and Generalized Method of Moments (GMM) estimation and testing
3. Simultaneous equations
4. Panel data models
5. Limited regressand models

Important information.

If you qualify for accommodations because of a disability, please submit a letter from Disability Services

Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with di erences of race, color, culture, religion, creed, politics, veteran's status, sexual orientation, gender, gender identity and gender expression, age, disability, and nationalities. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. See polices at www.colorado.edu/policies/classbehavior.html. and at www.colorado.edu/studenta airs/judiciala airs/code.html#student_code.

All students of the University of Colorado at Boulder are responsible for knowing and adhering to the academic integrity policy of this institution. Violations of this policy may include: cheating, plagiarism, aid of academic dishonesty, fabrication, lying, bribery, and threatening behavior. All incidents of academic misconduct shall be reported to the Honor Code Council (honor@colorado.edu; 303-725-2273). Students who are found to be in violation of the academic integrity policy will be subject to both academic sanctions from the faculty member and non-academic sanctions (including but not limited to university probation, suspension, or expulsion). Other information on the Honor Code can be found at www.colorado.edu/policies/honor.html and at www.colorado.edu/academics/honorcode/.

The University of Colorado Policy on Sexual Harassment applies to all students, sta and faculty. Sexual harassment is unwelcome sexual attention. It can involve intimidation, threats, coercion, or promises or create an environment that is hostile or o ensive. Harassment may occur between members of the same or opposite gender and between any combinations of members in the campus community: students, faculty, sta , and administrators. Harassment can occur anywhere on campus, including the classroom, the workplace, or a residence hall. Any student, sta or faculty member who believes s/he has been sexually harassed should contact the O ce of Discrimination and Harassment (ODH) at 303-492-2127 or the O ce of Judicial A airs at 303-492-5550. Information about the ODH and the campus resources available to assist individuals who believe they have been sexually harassed can be obtained at www.colorado.edu/odh/.