

UNIVERSITY OF COLORADO AT BOULDER
DEPARTMENT OF ECONOMICS
ECON 4848 - APPLIED ECONOMETRICS
PROFESSOR CARLOS MARTINS-FILHO

Office. Economics Building 105.

Meetings. MWF 10:00 AM - 10:50 AM, HUMN 1B45.

Office hours. F 11:00 AM - 1:00 PM. For appointments email `carlos.martins@colorado.edu`.

Prerequisites. Successful completion of ECON 3818 and ECON 3070 (recommended).

Course description and objectives. The main objective of this course is to equip you with basic undergraduate statistical/econometric knowledge and computational tools necessary to conduct empirical research. To that end we will:

1. study the classical linear regression model and extend it in selective ways (feasible GLS, limited regressands).
2. explore various sources of economic data
3. introduce you to the basic features of Stata (a data management and statistical software).

By the end of the semester you will be able to carry out an empirical project that addresses a relevant social or economic issue using regression analysis and real data.

Grades. Your course grade will be determined by two midterm examinations, an empirical project and a final exam. In addition there will be six homework sets. These homeworks will not be graded but you **MUST** turn in your answer by the due date. Failure to do so will result in a 5 percent reduction in your course grade for each homework you fail to turn in. Completion of the homeworks is critical for successful performance on the midterms and final exams. If you find yourself incapable of completing the homeworks you will probably be incapable of answering the questions in the midterms and final examinations. Homeworks will be posted on the class website at

http://spot.colorado.edu/~martinsc/ECON_4848.html.

The table below lists all evaluations, provides dates, and points.

Evaluation	Points	Date and time
homework 1	-	available 01.21 and due 01.28
homework 2	-	available 02.04 and due 02.11
homework 3	-	available 02.18 and due 02.25
homework 4	-	available 03.04 and due 03.11
homework 5	-	available 03.18 and due 04.01
homework 6	-	available 04.08 and due 04.15
midterm 1	20 points	02.11
midterm 2	20 points	03.18
empirical project	30 points	due 04.29
final	30 points	04.30, 7:30 PM - 10:00 PM

Textbook.

Wooldridge, J., 2009, *Introductory econometrics*. South-Western Cengage Learning, OH.

Software. Stata is available in the computer laboratory in the basement of the Economics Building and in Humanities 1B45. Visit <http://webdata.colorado.edu/labs/map/> for a list of computer laboratories and available software. If you wish to purchase Stata, visit

<http://www.stata.com/order/new/edu/gradplans/gp-campus.html>.

As a student in the university of Colorado you will be able to purchase Stata at a discount through GradPlan. There are multiple sources of information online about Stata. Several links to books, tutorials and examples are listed on the teaching portion of my webpage. A particularly useful book is,

Baum, C. F., 2006, *An introduction to modern econometric using Stata*. Stata Press, College Station, TX.

Topics and readings.

Chapters and sections are from the textbook. Handouts are available from my webpage in PDF format.

1. a) The nature of econometrics and economic data: chapter 1 and handout called **Econometrics**; b) Stata Handout (SH) 1.
2. The simple linear regression model and the least squares estimator: chapter 2, sections 2.1, 2.2, 2.3, 2.4 and SH2.
3. Multiple linear regression (MLR) model and the least squares estimator: chapter 3, sections 3.1, 3.2, 3.3, 3.4., Appendix D, Appendix E, and SH3.
4. Hypothesis testing for the MLR model under normality: chapter 4 and SH4.
5. Data scaling, dealing with data transformations, regressor selection, goodness-of-fit and prediction: chapter 6 and SH5.
6. Obtaining Economic Data: SH6
7. Regression with binary variables: chapter 7, sections 7.1, 7.2, 7.3 and 7.4. and SH7
8. Accounting for heterocedasticity: chapter 8, sections 8.1, 8.2 and SH8.
9. Functional form and regressor misspecification: chapter 9, sections 9.1, 9.2 and SH9.
10. Limited dependent variable models: chapter 7 section 7.5, chapter 17 section 17.1 and SH10.

Important information.

- If you qualify for accommodations because of a disability, please submit to me a letter from Disability Services in a timely manner so that your needs may be addressed. Disability Services determines accommodations based on documented disabilities. Contact: 303-492-8671, Willard 322, and www.colorado.edu/disabilityservices.

- Campus policy regarding religious observances requires that faculty make every effort to reasonably and fairly deal with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. In this class, if the two midterm, final or homework due dates prevent/inhibit you from exercising your rights to religious observance, please inform me by August 28, 2009 so that reasonable accommodations can be made. See full details at www.colorado.edu/policies/fac_relig.html
- Students and faculty each have responsibility for maintaining an appropriate learning environment. Students who fail to adhere to such behavioral standards may be subject to discipline. Faculty has the professional responsibility to treat all students with understanding, dignity and respect, to guide classroom discussion and to set reasonable limits on the manner in which they and their students express opinions. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender variance, and nationalities. See policies at www.colorado.edu/policies/classbehavior.html and at www.colorado.edu/studentaffairs/judicialaffairs/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, staff and faculty. Sexual harassment is unwelcome sexual attention. It can involve intimidation, threats, coercion, or promises or create an environment that is hostile or offensive. Harassment may occur between members of the same or opposite gender and between any combinations of members in the campus community: students, faculty, staff, and administrators. Harassment can occur anywhere on campus, including the classroom, the workplace, or a residence hall. Any student, staff or faculty member who believes s/he has been sexually harassed should contact the Office of Discrimination and Harassment (ODH) at 303-492-2127 or the Office of Judicial Affairs 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 <http://www.colorado.edu/odh/>