

University of Colorado at Boulder
Department of Economics
Econ 4848 - Applied Econometrics
Professor Carlos Martins-Filho

Office. Economics Building 105.

Meetings. MWF 3:00 PM - 3:50 PM, HUMN 1B45.

Office hours. M 8:00 AM - 11:00 AM. 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 the knowledge and tools necessary to conduct empirical research using basic econometrics. To that end we will:

1. summarize, review and extend the classical linear regression model
2. explore various sources of economic data
3. introduce you to the basic features of a data management and statistical software called Stata.

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. YouEvaluation

| Points |

<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. 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 heteroscedasticity: 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

- 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
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