

Introductory Applied Econometrics
Syllabus, Fall 2015

Instructor: Elisabeth Sadoulet
GSI: Erin Kelley

Welcome to ENV ECON 118/ IAS 118 Introductory Applied Econometrics!

This course is an introduction to applied econometrics. Econometrics is the application of statistical techniques to the analysis of economic questions. The goals for this course is that you all:

- Learn the basic of econometrics through real policy analysis and economic research questions, so that you learn to use econometrics for answering economic questions.
- Be exposed even superficially to the analysis of binary data, time series, and panel data, and to program evaluation, with real examples, so that you will know to recognize what needs to be done when faced with this sort of data or situation.
- Learn to conduct analysis with a sophisticated software (STATA), a highly valuable skill on the job market.
- Learn to be critical of regression results interpreted as causal, and how to build an argument towards causal inference.

Office hours and e-mail addresses

Elisabeth: Giannini Hall 213, Wednesday, 11am-12pm; esadoulet@berkeley.edu

Erin: Giannini Hall 244, Friday, 11am-12pm; erinmkelley@berkeley.edu

Additionally, on Mondays before problem sets are due Erin will have office hour 2-3:30pm.

Time and location: Lecture: T-Th, 9:30-11:00 am, 20 Barrows
Sections: Wednesday 9-10 am (103 Moffitt)
4-5 pm (3109 Etcheverry)

The course being over-subscribed, you need to sign up in person in your section the first week. Students not attending section will be automatically dropped from the class list.

Course webpage: <http://areweb.berkeley.edu/courses/EEP118/current/>

Required text: J.M. Wooldridge's Introductory Econometrics, Thompson ed. Any edition is fine. This text teaches econometrics from a user perspective. It is pragmatic, uses a lot of real world data, and teaches econometrics through examples. We'll follow this philosophy. There are copies on reserve at Moffitt library.

Statistical software: Problem sets will require you to use Stata. To purchase your own copy of the software for your computer, a single-user six-month license for Small Stata (sufficient for this course) is available through Berkeley's GradPlan for \$38. (An annual license is \$54.) The regular Stata with perpetual license costs \$198. Do this as soon as possible. See <http://www.stata.com/order/schoollist.html> to purchase (select CA, then UCB, then the product of your choice). Erin will hold Introduction to Stata sessions.

Prerequisites: Statistics 2 or equivalent. The material will be presented with minimum mathematics.

Requirements

1. Quizzes

There will be six short quizzes in the semester at the beginning of class. Your best 5 quizzes count towards your grade. The quizzes will take place on the following dates:

- Thursday, September 10: Quiz 1
- Thursday, September 24: Quiz 2
- Thursday, October 15: Quiz 3
- Thursday, October 29: Quiz 4
- Thursday, November 12: Quiz 5
- Thursday, December 1: Quiz 6

2. *Practice exercises*

Readings and practice exercises are given each class. See the "Daily assignment" link on the web page. Practice exercises due on Tuesdays will be collected at the beginning of class, those due on Thursdays are not collected. Practice exercises will not be individually graded, but extra credit will be given for an excellent record.

3. *Assignments*

There will be six assignments during the semester, but only your best 5 assignments will count towards your grade.

I urge you not to use the option on the first two or three assignments. Keep it for emergency or exceptional circumstances that may come later in the semester. Assignments are due at **beginning of class** on the following dates:

Tuesday, September 15: Assignment 1
Tuesday, September 29: Assignment 2
Tuesday, October 13: Assignment 3
Tuesday, November 3: Assignment 4
Tuesday, November 17: Assignment 5
Thursday, December 3: Assignment 6

Assignments will be posted on the class website 10 days before the due date. Homework handed in after 9:45am on the due date will be marked down 1.5 points (out of the 6 maximum), and homework handed in one or more days after the due date will be given NO CREDIT. Late homework must be handed directly to Erin, not left in a mailbox.

4. *Examinations*

There will be a mid-term and a final examination on the following dates:

Mid-term examination: Tuesday, October 20, 9:40-11:00 am.

Final examination: Tuesday, December 15, 3-6 pm

Policy on missed mid-term or final exam:

There is no scheduled make-up midterm or final exam. Students who miss an exam for any reason must communicate with Professor Sadoulet by e-mail or phone by 6:00 p.m. on the day of the exam (email: esadoulet@berkeley.edu; tel. 861 0820). Students need to have a written certificate from a medical or legal authority justifying the reason for having missed the examination.

For a missed mid-term, the student will take the mid-term as an open book take home examination. If the answers are of A quality, the final examination will be counted for 65% of the grade instead of 35%.

For a missed final exam, an "incomplete" grade will be given for the class. The student will have to take the final exam at another session. EEP 118 / IAS 118 is offered in spring and fall sessions of 2015.

Failure of the above will result in a 0 score for the examination.

Policy on regrading homework/exam:

If you believe that you lost points due to an error on our part, please bring your work immediately to the GSI. The GSI will correct admitted errors. If disagreement persists, you need to file a formal regrade request in writing. All requests will be handled by Prof. Sadoulet, she will examine the entire homework/exam and will regrade all those parts she feels appropriate, reserving the right to assign an even lower grade on the second round of grading. All requests for regrading must be handed in within one week of when the homework/exam is returned. No regrade requests will be considered after that time.

Honor code: The student community at UC Berkeley has adopted the following Honor Code: "As a member of the UC Berkeley community, I act with honesty, integrity, and respect for others." The hope and expectation is that you will adhere to this code.

5. *Grades*

The grade for the course will be based on the following components:

Quizzes: Five times 1 percent = 5 percent

Assignments: Five times 6 percent = 30 percent

Mid-term: 30 percent

Final: 35 percent.

Outline of course

Math Stat review (Appendix)

Simple regression (Chap. 2)

Multiple regression (Chap. 3)

Stat review (Appendix)

Inference (Chap.4)

Further on multiple regression analysis (Chap. 6)

Dummy variables for qualitative information (Chap. 7)

Simple panel data (Chap. 13)

Program evaluation (Chap. 7 + additional material)

Binary dependent variable (part of Chap. 17)

Basic regression with time series data (Chap 10)