Environmental Economics and Policy 118 / International and Area Studies 118

# Introductory Applied Econometrics Syllabus, Spring 2014

## Instructor: Steven Buck GSI: Andrew Crane-Droesch Reader: Dilek Uz

#### 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 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

Steven: Giannini Hall 234, Friday 1-2:30pm; <u>eep118.ucb@gmail.com</u> Andrew: Giannini Hall 234, Tuesday 10-11:30am; <u>andrewcd@berkeley.edu</u> Additionally, on Mondays before problem sets are due Andrew will have office hour 3-4:30pm.

Time and location	on: Lecture:	T-Th, 2-3:30pm, 141 Giannini	
	Sections:	Wednesday	9-10 am (247 Dwinelle)
		Wednesday	3-4 pm (187 Dwinelle)
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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: <a href="http://areweb.berkeley.edu/courses/EEP118/current/">http://areweb.berkeley.edu/courses/EEP118/current/</a>

**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 \$32. (An annual license is \$49.) The regular Stata with perpetual license costs \$179. Do this as soon as possible as delays occur in delivery at this time of the year. See <u>http://www.stata.com/order/schoollist.html</u> to purchase (select CA, then UCB, then product code ICGP or SMGPA). We will hold Introduction to Stata sessions.

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

# Requirements

## 1. Attendance to class and quizzes

There will be approximately six short quizzes in the semester at the beginning of class. We will drop your lowest scoring quiz. Attendance is not part of the grade, although I will keep regular attendance to better understand performance.

## 2. Practice exercises

Readings and practice exercises are given each class. See the "Daily assignment" link on the web page. They are due on every Tuesday (except when an assignment is due), at the beginning of class. They will not be individually graded, but your submission will be recorded. 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 for your final 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, February 4: Assignment 1
- Tuesday, February 18: Assignment 2
- Tuesday, March 4: Assignment 3
- Tuesday, April 1: Assignment 4
- Tuesday, April 15: Assignment 5
- Tuesday, April 29: Assignment 6

Assignments will be posted on the class website 10 days before the due date. Late homeworks lose 2 points (out of 6) per fraction of day late (note that assignments are late whenever submitted later than 2:15 pm on the due date. This implies an immediate loss of 2 points). Late homeworks must be handed directly to Andrew, not left in a mailbox.

### 4. Examinations

There will be a mid-term and a final examination on the following dates: Mid-term examination: In-class, tentatively scheduled for Tuesday, March 11<sup>th</sup>, 2:10-3:30 pm. Final examination: See University Schedule.

### 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 Buck via e-mail by 6:00 p.m. on the day of the exam (email: <u>stevenbuck@berkeley.com</u>). Students need to have a written certificate from a medical or legal authority justifying the reason for having missed the examination.

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 fall sessions every year. Failure of the above will result in a 0 score for the examination.

#### Policy on regrading homeworks/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. Buck, he 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 handled 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: 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)

### **Special Accommodations**

If you need disability-related accommodations in this class, if you have emergency medical information you wish to share with me, or if you need special arrangements in case the building must be evacuated, please inform me immediately by email or in office hours.