EEP/IAS 118: Introductory Applied Econometrics
Syllabus, Summer 2017

Instructor	Gregory Lane	**Office hours**	Tuesday 12:30pm
	gregory.lane@berkeley.edu		Giannini 236
Lecture	Mon - Wed, 10:00 AM - 12:00 PM	**Location**	Giannini 141
Section	Thursday, 10:00 AM - 12:00 PM		Mulford 240

Objectives: 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 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.

Recommended 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. While I **highly** recommend you get a copy of this text, everything you need to know will be covered in lecture / the notes.

Statistical software: Problem sets will require you to use Stata. Berkeley has made a copy available to you for free via the Citrix Receiver, which is a client and web browser plug-in that gives you secure web browser access to select UC Berkeley applications from anywhere. Details on how to install are available here: https://software.berkeley.edu/citrix. Note after you have downloaded the appropriate file at the bottom of the page, you will be prompted to enter account information - please use your CalNet user name and password.

You may purchase your own copy of the software for your computer if you wish. 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 as delays occur in delivery at this time of the year. See http://www.stata.com/order/schoollist.html to purchase (select CA, then UCB, then the product of your choice). I will introduce you to basic Stata commands during section, however you should get used to using the Stata "help" files (type help [command]) and the internet to help you with your coding.

Prerequisites: Statistics 2 or equivalent. As this is an applied course, the material will be presented with as little mathematics as possible. However I will expect you to have a working knowledge of random variables and their properties.

Course webpage: I will be using bcourses to provide course material, post grades, and send out announcements. If you do not have access to the bcourses site, please let me know via email.

Email policy: If you need to contact me, please email me at the address listed above. The email should contain "EEP/IAS 118" in the subject line, otherwise I may not respond in a timely manner. I will check my email daily Monday through Friday, and I will respond to emails within 48 hours unless the email is sent on Friday, in which case you may not receive a reply until Monday. If I think that the question cannot be adequately addressed via email, I will cover it in lecture or office hours. Coding problems are very difficult to diagnose over email, so I ask that you bring Stata problems to me only in section or office hours.

Section: Section is held on Thursday and is not strictly required (although highly recommended). I will use the Section time for three purposes:

1. Extra time to answer questions and review material from that week

2. Teaching Stata commands

3. Review for upcoming Exams

Please come to Sections prepared with questions about confusing material. By necessity this course will move fast, so use this time as an opportunity to catch up and fill in whatever you may have missed during the regular lecture.

Course Requirements

1. **Daily Assignments:** Readings and daily problems are given each class. I will not collect or grade these assignments. However, I highly recommend keeping up with these assignments as they will provide you with a good example of what I expect you to be able to accomplish on quizzes and exams.

2. **Quizzes:** There will be five short quizzes throughout the course that will be held at the beginning of class. Their purpose is to provide you with feedback as to whether or not you are learning the material. They will be on June 27th, July 5th, July 11th, July 25th, and August 1st. Your best 4 quizzes count towards your grade.

3. **Assignments:** There will be four problems sets during the semester. They will be require a combination of theoretical understanding and applied Stata work. Assignments are due at beginning of class on their due dates.

   Assignments will be posted on the class website a week before the due date. Homework handed in after class on the due date will be marked down by 20% of the total grade, and homework handed the day after the due date or later will be given NO CREDIT.

4. **Examinations:** There will be a mid-term and a final examination on the following dates:

   - Mid-term: Monday, July 17th
   - Final: Wednesday, August 9th (the last day of class)

Regrade policy: If you believe that you lost points due to an error on my part, please bring your work immediately to me and I will correct clear errors. If disagreement persists, I will regrade the *ENTIRE* homework/exam, 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.

Missed mid-term or final exam: There is no scheduled make-up midterm or final exam. Students who must miss an exam for any reason must communicate with me by e-mail before the exam (email: gregory.lane@berkeley.edu). If at all possible, the student will take the exam *before* the scheduled exam time.

   If you cannot take the exam before hand, 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 fall 2017. Failure of the above will result in a 0 score for the examination.

Academic honesty: There is an honor code to which everyone on campus is expected to adhere: "As a member of the UC Berkeley community, I act with honesty, integrity, and respect for others." We have all been asked to include the honor code on our syllabi. See http://www.asuc.org/honorcode/resources.php and http://teaching.berkeley.edu/berkeley-honor-code for more information.

   While working with your peers can be very useful when completing problem sets, each student is required to turn in an individual assignment with answers written in his or her own words. I take plagiarism and other types of academic dishonesty very seriously, and I will report them to the Center for Student Conduct. Evidence of academic dishonesty will result in a grade of zero on the exam or assignment in question in addition to any other disciplinary actions. To avoid any problems, please familiarize yourself with the definitions of academic dishonesty provided here http://sa.berkeley.edu/conduct/integrity/definition.

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

- Quizzes: 5 percent

- Assignments: Five times 6 percent = 30 percent

- Mid-term: 30 percent

- Final: 35 percent.

Final grades will be determined based on a absolute judgement of how much I feel you have learned in the course as well as how the student has done relative to the rest of the class. Therefore, it is quite possible for everyone (or no one) to achieve an "A" in this class.

Course outline: I will attempt to cover the topics listed below. However, I may add or subtract topics depending on the pace we are able to achieve during lecture.

- 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)

- Program evaluation (Chap. 7 + additional material)

- Simple panel data (Chap. 13)

- Binary dependent variable (part of Chap. 17)

- Basic regression with time series data (Chap 10)

- Instrumental Variables (time permitting)