Econometrics A

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Office: Rosenwald 205F
Office Hours: Wednesdays 10:30a - 12:00p (or by appointment)
Class 1: Tues. & Thurs., 10:30a-11:50a, Rosenwald 015
Class 2: Tues. & Thurs., 1:30p-2:50p, Rosenwald 015
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Office Hours: Wed. 3:00p-5:00p (or by appointment)
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Section 1: Mon. and/or Wed., 5:00p-5:50p, Cobb 119 (or BSLC Computer Room)
Section 2: Mon. and/or Wed., 7:00p-7:50p, Cobb 119 (or BSLC Computer Room)
Webpage: http://home.uchicago.edu/~amshaikh/teaching/econometrics_a_s09.html

Prerequisites:

I will be assuming the mathematical background provided in the prerequisites for the class. If you do not know the material from these classes, then you will probably find the class to be difficult. In particular, the class will make use of calculus, basic probability and statistics, and some matrix algebra. Some of this material will be reviewed during the course, but this review will be done very quickly. If you have any questions about the adequacy of your background, then let me know as soon as possible.

Required Textbook:

Introduction to Econometrics, Second Edition by James Stock and Mark Watson.

In the lectures, I will often provide more mathematical details than found in the text. For this reason, you are strongly advised to attend each of the lectures and try to follow them closely.
Grading:

1. Problem Sets (approximately 6): 25%
2. Midterm Exam: 30%
3. Final Exam: 45%

You should feel free to work together on the problem sets, but each student must submit his or her own set of solutions. On each problem set, you must write the names of the other students with whom you worked.

Problem sets should be turned in at the end of class on the date they are due. Late problem sets will not be accepted. At the end of the quarter, the lowest problem set grade will be dropped.

Some of the problem sets will involve computational components. The teaching assistants will provide instruction in the use of Stata during the sections to help complete these portions of the assignments.

Letter grades will not be assigned on any of the problem sets or exams, but rather only at the end of the course.

The final exam will be given during reading period only. I expect everyone to take the exam at that time. If you have a conflict, then please let me know as soon as possible.

Students wishing to withdraw from the class must notify me by email or in person no later than two hours before the first exam.

Students wishing to take the class pass/fail must ask for permission to do so by email or in person no later than the end of the third week of classes. A passing grade will be defined to be a grade of C- or better.

Cheating on any assignment in any way will be dealt with severely. In particular, I reserve the right to penalize students beyond the value of the particular assignment on which they cheated.

Other Information:

Students should attend the class and section in which they are enrolled. If space becomes an issue, I will enforce this policy.
Course Topics:

Below is an outline of topics for the quarter. This corresponds roughly to chapters 2-8, 12, 17 and 18 of the textbook. The appendices to the chapters often include important material, so be sure to read those parts of the textbook as well. We may cover some additional topics if time permits.

Lecture 1: Univariate distributions

Lecture 2: Bivariate and multivariate distributions

Lecture 3: estimators, Finite-sample properties of

Lecture 4: estimators, Large-sample properties of

Lecture 5: Inference for means and differences of means

Lecture 6: Simple linear regression, Three interpretations of

Lecture 7: Simple linear regression, Solving for coefficients, ordinary least squares

Lecture 8: Simple linear regression, $R^2$, properties of ordinary least squares

Lecture 9: Simple linear regression, Inference

Midterm Exam

Lecture 10: Linear algebra

Lecture 11: Multivariate linear regression, Three interpretations of

Lecture 12: Multivariate linear regression, Solving for coefficients, ordinary least squares

Lecture 13: Multivariate linear regression, $R^2$, adjusted $R^2$, properties of ordinary least squares

Lecture 14: Multivariate regression, Inference

Lecture 15: Multivariate regression, Inference

Lecture 16: Instrumental variables for simple linear regression with a single instrument

Lecture 17: Instrumental variables for simple linear regression with multiple instruments

Lecture 18: Instrumental variables for multivariate linear regression

Final Exam