Economics 4818 -- Introduction to Econometrics
Fall 1996

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Economics Bldg. 115
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Office Hours: Tuesday 9:00 -- 12:00 or by appointment.

Textbook: Introducing Econometrics,
William S. Brown

Course Requirements:
- One midterm and one final exam (each worth 30 percent of the final grade)
- homework sets with problems taken from the textbook (10 percent of the final grade)
- quizzes (10 percent of the final grade)
- an applied project in which you will analyze a dataset I will provide using the statistical software SAS. I will give specific instructions, you will run the required analyses and submit reports with your results and findings. (20 percent of the final grade)

Course Outline:
We will start with a review of the concepts that you learned in your first statistics class (the notion of population, discrete and continuous random variables, the distribution, mean and variance, sampling and test of hypotheses; independent and correlated pairs of random variables) [Chapter 2 of the book]

Then we will introduce the classical linear regression model, discuss its meaning, spell out the underlying assumptions and lean the most commonly used estimation technique(s) [Chapter 1], and their properties.

Quiz about here
We will then learn how to use our model to test hypotheses that have an economic interpretation, how to adapt models to the specific issue or data we are looking at, how to check whether the model makes sense altogether using the so-called F tests. [Chapter 3]

*Quiz about here*

Initially, we will use very simple models (models with one dependent variable and one independent variable). Once we have mastered the simple models, we will build on our results to accommodate more complex models (e.g., several independent variables). This will allow us to try different functional forms for the independent variables and dummy variables. [Chapter 4]

*Midterm*

We will then examine what happens and learn what we should do when one or more of the assumptions of the classical linear regression model do not hold true. We will consider non-normal errors, heteroskedastic errors [Chapter 7], serially correlated errors [Chapter 6], collinear independent variables [portions of Chapter 4], omitted and redundant variables [Chapter 5]. Finally, we will look at the problem of simultaneous regressors and see how that can be accommodated.

*Quiz at the end of each topic/chapter*

Special topics will be covered towards the end of the term include the use of weights, special types of sampling, using regressions for forming predictions, and regressions in which the dependent variables is a dummy.

*Final*