The University of Chicago
Department of Economics
ECONOMICS 209
HONORS ECONOMETRICS
LECTURE SCHEDULE

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In this course we will study the main quantitative tools used by economists to test their theories against real world phenomena. The primary focus of this course is to acquaint students with the linear regression model under the classical assumptions. To do so, we will divide the lectures into 4 main topics. First, we will study estimation theory. We wish to determine how we can quantify the relationship between a set of independent variables and a dependent one. We will study the different interpretations that the OLS estimator can have and under what assumptions this equivalence holds. Then, we will shift gears and we will discuss distribution theory and hypothesis testing. We wish to determine how to test our theories empirically. Once we have determined the properties of the OLS estimators under the classical assumptions, we will see the effect that relaxing each of the classical assumptions has on the properties of the OLS estimators. We will also study how to estimate the underlying relationship between two variables when some of the classical assumptions are violated and we will determine the propertiesof these estimators. Finally, we will study model building.

An outline of the most important topics of the course follows.

Lecture	Topics	Reading
1	Review of Matrix Algebra	
2	Review of Probability Theory	
3	Asymptotic Theory	
4	Estimation Theory I: MLE	
5	Estimation Theory II: GMM	
6	Estimation Theory III: OLS and its Assumptions	
7	Properties of the OLS Estimators, The Gauss Markov Theorem	
8	Distribution Theory	
9	Hypothesis Testing	
10	MIDTERM	
11	Multicollinearity and Identification	
12	Heteroskedasticity: GLS and FGLS, Robust Standard Errors.	
13	Autocorrelation: GLS and FGLS.	
14	Specification Bias I: Ommitted Variables	
15	Specification Bias II: Irrelevant Variables	
16	Residual Regression	
17	Measurement Error and Dummy Variables	
18	Simultaneity I: Identification	
19	Simultaneity II: Estimation: SUR, ILS, and 2SLS.	