ECONOMICS 341K, Unique No. 33480 **D. Hamermesh** **Fall 2010**

INTRODUCTION TO ECONOMETRICS

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REQUIRED: Jeffrey Wooldridge, *Introductory Econometrics*, Thomson Publishers, 2009, 4th edition. You should have access to a computer that has Microsoft EXCEL and STATA on it. Having access to a computer in one of the Department's micro labs would be a substitute, as it is easy to use STATA on in the Department (and STATA is much the best choice for analyzing the problem sets and producing the term paper). Tutorials will be provided on using STATA. The data sets on which the problem sets are based can be downloaded from my website.

PHILOSOPHY: My purpose is to teach/train you to use the techniques of econometrics (and numerous former students have written back that they have used many of the techniques taught in the course in their work in management and other consulting companies, financial institutions and non-profit organizations). This requires some statistical theory, but the main focus will be on applying econometric technique. Econometrics should be the most useful thing you learn as an undergraduate economics major. The course will enable you to formulate and test econometric hypotheses, and will cover such specific topics as: Ordinary least-squares regression; problems of heteroskedasticity, multicollinearity and autocorrelation; qualitative independent and dependent variables; panel data; simple time-series analysis.

GRADING: There will be a midterm exam (taking one full class) on Thursday, October 14, and two half-class exams (Thursdays Sept. 23 and Nov. 11). There will be a 2-1/2-hour final exam (on **Thursday, Dec. 9, 2-4:30**). Each half-class exam counts 10 percent; the midterm counts 20 percent, the final counts 30 percent. A 7-page paper will count for 25 percent of the grade, and the remaining 5 percent is based on the problem sets, which will be assigned as the course proceeds. You must do the problem sets to succeed in this course, and the only grading of these short sets will be to make sure you have done them. The 7-page paper is a mini research project using a data set of your choice and is due on Friday, Dec. 3. The paper is to be done jointly with one other student—so pair up with a friend/acquaintance very early. You should pick a topic before October 7, and you must discuss it with me and get my approval for it. The paper should show that you have learned how to **USE** econometric techniques and can write up the results.

CLASS AND READING SCHEDULE

Week Beginning:

Aug. 23, 30: **Review of Statistics**
Wooldridge: Appendices B and C

Sept. 6: **Introduction to Regression**
Wooldridge: Chs. 1, 2

Sept. 13, 20: **Multiple Regression: Estimation and Hypothesis Testing**
Wooldridge: Ch. 3

Sept. 27: **More Estimation/Hypothesis Tests**
Wooldridge: Ch. 4

Oct. 4: **Miscellaneous Issues: Fitting and Prediction**

Wooldridge: Ch. 6

Oct. 11: **Begin Qualitative Variables**
Wooldridge: Begin Ch. 7. Read Ch. 19 as input into your term project

MIDTERM (Thursday, Oct. 14)

Oct. 18: **Finish Qualitative Variables**
Wooldridge: Finish Ch. 7; Ch. 17, pp. 574-587 only

Oct. 25, Nov. 1: **Heteroskedasticity; Specification and Measurement Error**
Wooldridge: Ch. 8; Ch. 9

Nov. 8: **Elements of Panel Data Analysis**
Wooldridge: Ch. 13

Nov. 15: **A Bit More on Panel Data; Doing Econometric Studies**
Wooldridge: Ch. 14, pp. 481-489; Ch. 19 (again)

Nov. 22, 29: **Time-Series Estimation**
Wooldridge: Ch. 10; Ch. 12, pp. 408-427 only