

## 230316 – Empirical Research in Business Fall 2009

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Office hours: Wednesdays 17:00-19:00

**Lectures:** Tuesdays 15:45-18:30, CZ 112

**Labs:** Wednesdays (23/9, 7/10, 14/10, 4/11, 11/11, 25/11, 9/12) 14:45-16:30, GZ 102

**Textbook:** Introductory Econometrics, 4th Edition, Jeffrey Wooldridge (ISBN: 0324581629)

**Course Webpage:**

First half: [http://www.unc.edu/~jbhill/Tilburg\\_Res\\_Meth\\_MA\\_homepage.htm](http://www.unc.edu/~jbhill/Tilburg_Res_Meth_MA_homepage.htm)

Second half: <http://www.meltemdaysal.com/teaching/erb.html>

### Introduction

Empirical Research in Business is a course that aims to expose students to econometric techniques frequently used in applied microeconomic research. At the end of the semester, students will be able to conduct basic empirical work using economic data and to evaluate empirical research that others have done. Course time will be split evenly between theory and examples. We will first present a standard textbook treatment of the topic, then we will discuss a number of papers that have used the techniques outlined in class. Students will be expected to read the assigned papers and be able to discuss them. To assist you in your programming and to provide you with a better understanding of the techniques we will be discussing, the teaching assistant, Tunga Kantarci, will hold seven computer sessions. The statistical software used in these sessions will be STATA.

### Prerequisites

A solid introductory course in statistics.

## Grading and Course Policies

Your final grade will be based on:

20% Problem Sets

40% Midterm Exam (October 20, 2009)

40% Final Exam (December 8, 2009)

Make-up exams will be given only in the event of illness substantiated by a doctor's note. There will be **no extra credit** opportunities.

### Problem Sets

Throughout the semester you will receive four problem sets (two in each half). They will be posted on the corresponding course websites. The problem sets will blend both econometric theory and practice, involving problem solving and STATA applications. You will be graded based on **effort**. You will receive full credit if you make an honest attempt to answer all the questions. Problem sets are due at the beginning of the lecture. If you can't make it to class, you can email your answers. We will either solve the problem sets during the lecture or we will post the solutions to our websites. For that reason, problem sets that are handed in/emailed late will **not** receive any credit.

### Midterm and Final

All exams will be **closed-book**. The midterm will cover the first half of the semester, while the final will cover the second half.

Table 1: Weekly Course Schedule

<b>Week 1</b>	Distribution, Conditional Distribution, Conditional Expectation, Best Linear Prediction, t-test (Lecture)
<b>Week 1–3</b>	Linear Regression Model: Estimation in interpretation (OLS, GMM) (Wooldridge 2–3)
<b>Week 3–4</b>	Linear Regression Model : Inference (t,F,W,LR; ANOVA; Goodness-Fit R2,Adj. R2, IC) (Wooldridge 4–6)
<b>Week 4–5</b>	Forecasting; Dummy Variables; Functional Form (White, RESET); Structural Change (Chow) (Wooldridge 7 & 9)
<b>Week 5–6</b>	Generalized Linear Model: Het., Autocorr. (test, estimation, robust t) (Wooldridge 8)
<b>Week 7</b>	Panel Data Models (Wooldridge 13 & 14)
<b>Week 8</b>	Experiments and Quasi-Experiments & Clustering (Lecture Notes)
	Meyer, B., “Natural and Quasi-experiments in economics,” <i>Journal of Business and Economic Statistics</i> , 12, 1995, 151-161.
	Cook, P., and G. Tauchen, “The Effect of Liquor Taxes on Heavy Drinking,” <i>Bell Journal of Economics</i> , 13, 1982, 379-389.
	Moulton, B.R., “An Illustration of a Pitfall in Estimating the Effects of Aggregate Variables on Micro Units,” <i>Review of Economics and Statistics</i> , 72 (May, 1990), pp. 334-338.
<b>Week 9</b>	Instrumental Variables Estimation (Wooldridge 15)
	Angrist, J.D., and W.N. Evans, “Children and Their Parents Labor Supply: Evidence from Exogenous Variation in Family Size,” <i>American Economic Review</i> , June 1998, vol 88, 450-477.
	Angrist, J.D., “Lifetime Earnings and the Vietnam Era Draft Lottery: Evidence from Social Security Administrative Records,” <i>American Economic Review</i> , 80, 1990, 313-336.
<b>Week 10</b>	Regression Discontinuity Design (Lecture Notes)
<b>Week 11</b>	Limited Dependent Variable Models
	Evans, W., and R. Schwab, “Finishing High School and Starting College: Do Catholic Schools Make a Difference?” <i>Quarterly Journal of Economics</i> , November 1995.
	Gupta, S., G van Houtven, M. Cropper, “Paying for Permanence: An Economic Analysis of EPA’s Cleanup Decisions at Superfund Sites,” <i>RAND Journal of Economics</i> , 27(3), 1996, 563-582.
<b>Week 12</b>	FINAL EXAM (in class during lecture)