Boston College
Department of Economics

Econ 2228.06 – Econometric Methods
O'Neill 257

Professor Geoff Sanzenbacher
Day/Time: MW 4:30PM

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Office Hours: Maloney 391A, Monday and Wednesday, 12pm – 2pm and by appointment.

Required Text: Wooldridge, Jeffrey M., Introductory Econometrics: A Modern Approach (Any addition, although reading suggestions come from 7th Edition)

Iclicker Device: Should be purchased, will be used frequently in class.

This is an introductory course in the use of econometric methods, with an emphasis on empirical applications and cross-sectional analysis. Our focus will be on learning how to do econometrics, not just learning econometrics. While the course will cover the development of the formal tools of econometric analysis (simple and multiple regression analysis, estimation, inference, qualitative variables, IV estimation, experimental approaches and so forth), we will also spend quite a bit of time on empirical methods and working with data. As such, an important part of the course will be a set of empirical exercises and a research paper in which students will be building their own datasets and applying the various econometric methods developed in the course.

Grading and Course Requirements: The final grade will be assigned based on the requirements and weights described below. The rule for final grade assignment will be: 93+ (A), 90-92 (A-), 87-89 (B+), 83-86 (B), 80-82 (B-), 77-79 (C+), 73-76 (C), 70-72 (C-), 67-69 (D+), 63-66 (D), 60-62 (D-), below 60 (F). I will provide your current grade after the midterm so you know where you stand.

Three Exams (15 percent for Midterm 1, 25 percent for Midterm 2, 25 percent for Midterm 3, 65 percent in total): There will be three exams. Course grades for exams may be curved and extra credit may be offered. The final is cumulative. Exams are September 23rd, October 28th, and December 16th (in our usual classroom at 4:30pm).

Labs (10 percent of grade): Mandatory and graded EC228 course wide labs, focused on using STATA in empirical/econometric analysis. Course grades for labs may be curved.

Four Problem Sets (2.5 percent of grade each, 10 percent in total): These will focus on empirical applications of the material covered in class. They will be graded on the following scale: 90 to 100 percent right 10/10, 80 to 89 percent right 9/10, 70 to 79 percent 8/10, 60 to 70, 7/10, under 60 percent 6/10. I will not provide comments on individual problem sets as I will provide solutions online.

Issue Brief with Empirical Analysis (15 percent of grade): You will be on a 1-4 person team writing a 2,500 – 3,000 word paper that will include a simple regression analysis. The brief will be due Wednesday December 11th.

Course Organization and Expectations

Lectures: There are two lectures per week most weeks, save for holidays (See schedule below). There is no attendance grade for the course, although attendance is highly recommended to do well on the exams. I will be doing lectures through "chalk talk" and posting PPTs to help you study.

Integrity: Please familiarize yourself with the "Academic Integrity" section of the Boston College Catalog, which is also available online. You should feel free to work together on problem sets, but please turn in your own work. You can find more information here: https://www.bc.edu/content/bc-web/academics/sites/university-catalog/policies-procedures.html#academic_integrity_policies.

Canvas: I will be using Canvas to provide you with a variety of information, including lectures and assigned readings and any assignments as well as example do files.

In conclusion, let me say welcome to the course! Econometrics is an exciting subject area that will help you better understand the world you live in. Please keep up with current events and feel free to ask me about them in class and how they might relate to the material.

Good luck! Here is a brief outline of the course.

Date	**Topic**
Statistical Review	
August 26	Introduction Types of economic data
August 28	Means and variances Measures of association
September 2	**No Class – Labor Day**
September 4	Population, samples, and estimation Basics of inference and confidence intervals
Simple Regression Model	
September 9	The Simple Regression Model
September 11	Deriving OLS Estimates Properties of OLS in any Sample

Date	**Topic**
September 16	Scaling and logarithms Key OLS Assumptions and Implications Variance of the estimate
September 18	Finishing up simple regression and review
September 23	**Midterm 1**
Multiple Regression and Inference	
September 25	Multiple independent variables Characteristics of Multiple Regression
September 30	Characteristics of Multiple Regression (cont.) Omitted variables and bias
October 2	Inference
October 7	Inference continued Linear Combinations
October 9	Finishing up inference: The F-test
October 14	**No Class – Fall Break**
October 16	Functional form
October 21	Goodness of Fit Picking a model
Qualitative Variables	
October 23	What is qualitative data? Interpreting a single indicator Regressions with multiple indicators
October 28	**Midterm 2**
October 30	Continue discussion of indicators Binary dependent variables

Date	**Topic**
Failure of Assumptions	
November 4	Heteroskedasticity and robust standard errors
November 6	Functional form misspecification Omitted variables and proxies
November 11	Measurement error Outliers, missing variables, and nonrandom samples
Advanced Topics	
November 13	Working with real data for your paper
November 18	Difference-in-differences
November 20	Regression Discontinuity
November 25	Introduction to Instrumental Variables
November 27	**No Class – Thanksgiving**
December 2	Continuing Instrumental Variables
December 4	Introduction to time series analysis
December 16	**Final Exam**

Please Note: This schedule is an outline for the course and is subject to change as I feel necessary or because of inclement weather. Any changes will be noted by me during class.