

Introduction to Econometrics

ECONOMICS 345-002 – Spring 2013
Robinson Hall A249
Tuesday, Thursday (Noon – 1:15)

Instructor: Jake Russ (just call me Jake)

Email: jruss2@masonlive.gmu.edu

Office: Enterprise Hall 3rd Floor

Course Website: Piazza/Blackboard

Office Hours: By appointment, e-mail me to set up a time/location.

Course Description:

Econometrics is the application of statistical techniques and analyses to the study of problems and issues in economics. This course will emphasize the practice of econometrics as well as the theory underlying these statistical techniques. This course is designed to be comprehensive, meaning we'll start from scratch, assuming that you come into the course remembering only a little about statistics and nothing about econometrics. (If this is false, we'll pick up the pace).

Prerequisites

ECON 306, ECON 311, and STAT 250 and STAT 350 or STAT 344 and STAT 354

Textbook

The required text for this course is: Introduction to Econometrics, James Stock and Mark Watson (the 2nd and 3rd editions are nearly identical). Both Peter Kennedy's A Guide to Econometrics and A.H. Studenmund's Using Econometrics are excellent introductory resources as well, but I will not refer to either as part of this course.

Honor Code

In addition to the standards outlined directly in this document, the university's honor code governs every action you take in this class. Violations will be handled according to university policy. No exceptions.

Grading

Assignment	Weight
In class quizzes/Piazza participation	10%
Problem sets (4)	20%
Midterm	25%
Final exam	30%
Paper	15%

While there is no explicit grade for class attendance, you are recommended to attend class as the manner in which material is presented will often deviate substantially from the Stock & Watson textbook. Moreover, some material will only be covered in class. All material covered in class is examinable. All graded materials require you to show your work for full credit.

The distribution of the final letter grades is not fixed in advance (i.e., I do not grade purely on a curve), nor will the absolute standard necessary for certain letter grades be pre-defined. If you demonstrate understanding of the basic concepts covered in class and perform averagely on the problem sets, you can expect a B.

Introduction to Econometrics

You may work together on homework in groups of no more than two, but you still have to hand in work individually. All materials you turn in should reflect your own understanding of the material. **If you collaborate with another, please write down the name of your colleague on the assignment that you turn in.** Assignments are due at the start of class. Should you have to miss class when an assignment is due, it is your responsibility to drop off your homework, in advance, to my mailbox in Enterprise Hall (3rd floor).

Make sure your GMU email account is in working order. At times I may need to communicate information about class through e-mail and I will use GMU's email system.

Course Outline

- I. Econometric Philosophy (Chapter 1)
 - a. How do economists search for simplified descriptions of data patterns? And why?
- II. Statistics Review (Chapters 2-3)
 - a. Random Variables
 - b. Sampling
 - c. Estimators
 - d. Hypothesis testing and confidence intervals.
- III. Experimental Design
 - a. The inductive method and causal effects.
- IV. Linear Regression (Chapters 4-9)
 - a. OLS estimation
 - b. Statistical properties of regression estimators
 - c. Multiple regression
 - d. Analyzing model results
- V. Extensions (if time allows – Chapters 10,11,12)
 - a. Panel data/fixed effects estimators
 - b. Limited dependent variables (probit and logit)
 - c. Instrumental variable estimation

Final Exam – Thursday, May 9th 10:30AM – 1:15

Your entry ticket to the final exam will be a hard copy of your paper.

Disability Notice:

If you are a student with a disability and you need academic accommodations, please see me and contact the Disability Resource Center (DRC) at 703.993.2474. All academic accommodations must be arranged through that office. <http://ods.gmu.edu>

Other Important Dates

Last day to add classes/Drop with no tuition penalty—**Tuesday, January 29th**

Last day to drop (33% tuition penalty) – **Tuesday, February 12th**

Last day to drop (67% tuition penalty)—**Friday, February 22nd**

Selective Withdrawal Period – **Monday, February 25th - Friday, March 29th**