

ECON 345: Introduction to Econometrics

Fall 2003

Professor: Jon Klick
Email: jklick@aei.org
Phone: 202-862-5826
Course Web Page: <http://mason.gmu.edu/~jklick/econ345.html>

Meeting Time: Wednesday 7:20-10:00
Meeting Place: Enterprise 173

Office Hours: I am more than happy to come to campus before class to meet with students on an as needed basis. If strictly necessary, meetings can be arranged on alternate days as well. Please call or email me to arrange a meeting.

Course Goal: This course will introduce you to the science and art of econometrics (Hi, econometrics; I'm Jon). Econometrics involves using statistical methods and economic theory to analyze non-experimental data. Fun stuff indeed!

Course Text: James Stock and Mark Watson, *Introduction to Econometrics*, Addison Wesley: 2003. ISBN: 0-201-71595-3.
This book should be available in the bookstore, but I suggest looking for a used copy online, since the book is fairly expensive.

Software: I will assign a number of applications throughout the semester that require you to have access to statistical software. Further, your semester project will also require access. Buy Stata. I will discuss Stata programming in class and will provide all assignment data in Stata format, so owning the software will make your life much easier. You basically have 3 options here:

- 1) One Year License for Intercooled Stata: \$89
- 2) One Year License for Small Stata: \$39
- 3) Perpetual License for Intercooled Stata: \$129

Which should you buy? If you plan to ever use econometrics again after this semester (especially if you plan to go to grad school in economics, policy, business, etc), buy the perpetual license. Otherwise, get small Stata (though recognize that it limits you to 1,000 observations). Don't buy the manuals. Stata's built-in help is usually good enough.

To buy Stata, call them at 1-800-782-8272 (Monday thru Friday 7:30 to 5 Central Time) and tell them that you are ordering under the GMU grad plan. Stata will send a copy of the order to David Armor in the School of Public Policy. You can then pick up your order from Professor Armor's research assistant in Finley 201B. Best times will be Tuesday afternoon, all day Wed., and Thurs. morning.

Attendance: Attendance is not required, but is presumably helpful.

Grading:	Final	30%
	Midterm	25%
	Paper	25%
	Assignments	15%
	Media Project	5%

Grades:	90 – 100	A
	80-89	B
	70-79	C
	60-69	D
	0-59	F

Exams: Both the final and midterm will be open book, open notes.

Paper: You must think of an interesting issue that can be examined econometrically, collect the necessary data, perform the econometric analysis, and write a relatively short (fewer than 20 pages in most cases) paper that discusses your results. As soon as you have a potential topic, send me an email describing it, and I will discuss the project with you. If you have no topic by October, don't worry; I can help you. If you have no topic by November, worry, but I can still help you. If you have no topic by December, cry.

Assignments: There will be 6 short problem sets posted on <http://mason.gmu.edu/~jklick/econ345.html> through the semester that pertain to material we have just covered. You can do all, some, or none of them, and I will count your 3 highest grades toward your final grade. Doing all of them, will help you make sure you understand the material as we move through the semester, and it gives you some insurance in your grade since you will not be affected by up to three bad assignment grades. 'Nuff said.

Media Project: The news media very often rely on econometric analyses in stories, and they usually do a poor job in interpreting the underlying research. At some point in the semester, find a newspaper story that relies on some econometric research. Track down the original research/study and spend 5 minutes in class discussing whether the writer correctly interpreted the original research.

Calendar/Reading Assignments:

August 27: Who Am I; Why Am I Here?
What is econometrics?
That's kind of like statistics, right?

September 3: Bivariate Regression
Stock and Watson Chapter 4

September 10: Multiple Regression
Stock and Watson Chapter 5
Assignment 1 Due

September 17: Non-linear Regression
Stock and Watson Chapter 6

September 24: Applications
Stock and Watson Chapter 7
Assignment 2 Due

October 1: Applications
<http://mason.gmu.edu/~jklick/diabetes.pdf>
<http://mason.gmu.edu/~jklick/dollars.pdf>
<http://mason.gmu.edu/~jklick/sal.pdf>

- October 8: Midterm Exam
- October 15: Panel Data
Stock and Watson Chapter 8
Assignment 3 Due
Media Group 1
- October 22: You Big Dummy
Stock and Watson Chapter 9
Media Group 2
- October 29: Instrumental Variables
Stock and Watson Chapter 10
Assignment 4 Due
Media Group 3
- November 5: Applications
Stock and Watson Chapter 11
Media Group 4
- November 12: Applications: Sex, Drugs, and Infant Mortality (what, you expected rock and roll? We can't have too much fun . . . this is an econometrics course after all)
<http://mason.gmu.edu/~jklick/std.pdf>
<http://mason.gmu.edu/~jklick/drink.pdf>
<http://mason.gmu.edu/~jklick/Reform.pdf>
Assignment 5 Due
Media Group 5
- November 19: Time Series and Forecasting
Stock and Watson Chapter 12
Media Group 6
- November 26: Thanksgiving Recess – No Class
- December 3: Time Series and Forecasting Continued
Stock and Watson Chapters 13, 14
Assignment 6 Due