

Basic Econometrics (Economics 205) Davidson College Jan - May 2012

SYLLABUS

Instructor:	Mark C. Foley	Office:	Chambers 3140
Class hours:	12 ¹⁵ – 1 ³⁰ p.m., TR	Office hours:	10 ³⁰ -11 ³⁰ a.m., MF; 2-3 p.m. W, 9 ¹⁵ -11 TR & by app't
Lab hours:	1 ⁴⁰ - 2 ⁵⁵ p.m, Tue or Thur	Phone:	office = 704.894.2248 cell = 704.500.3090
Location:	Chambers 2164 (labs in Ch. 3130)	Email:	mafoley@davidson.edu
URL:	http://www.davidson.edu/economics/foley		

Course Description

Econometrics is the application of mathematical and statistical techniques to economic data. Although randomized experiments, in society and in classroom “laboratories,” are now common, economics is still primarily a non-experimental science, unlike some natural sciences. That is, for many questions of interest, it is not feasible, or ethical, to control scientifically who gets a treatment (say, an extra year of education) and who does not. Econometrics attempts to do more than simply document an association between two variables (e.g., people with more years of education, on average, have higher incomes than those with less). It attempts to estimate the *causal* effect of a variable of interest on the outcome (e.g., if an individual acquires an additional year of education, she will have a higher income, on average). Finally, econometrics also attempts to quantify the degree of accuracy of the estimated causal effect. In other words, hypotheses are formulated and tested.

This course has four main goals:

1. to develop your understanding of the purpose, estimation methods, and results of regressions in peer-reviewed journal articles.
2. closely related to the first goal of understanding “econometric tools,” I hope to develop your intuition and knowledge about which tool or method to use in different situations. This will help in your own research and also help you become a critical reader of applied economics literature.
3. you will build on the *Excel* skills you learned in statistics by utilizing the software program *Stata* for econometric analyses.
4. you will learn the *process* of empirical economic research by conducting a semester-long individual project in which you write an applied econometrics research paper on a topic of your choosing.

Course Timetable

There is a detailed course timetable on the class webpage. See link on my homepage. It contains assigned readings, exam dates, and due dates.

Course Requirements & Policies

There are two lectures and one lab session each week. There will be weekly lab assignments, graded homeworks, three reviews, an oral presentation, and a regression analysis paper. In the project, you will apply regression analysis, the most commonly used tool of empirical economics, to a topic of your choice. The goal is to develop and estimate an econometric model of the causal effect which an explanatory

variable of interest has on a dependent variable, controlling for relevant other factors. Separate handouts describing the oral presentation and regression analysis paper will be distributed in class.

Graded Homeworks

The graded homework assignments are usually a set of problems from the textbook. They are open-textbook, open-lab manual, open-notes, with the use of calculators and *Stata* and *Excel* permitted. You may do them as part of a study group, which I encourage, but each student must write up their own answers, and give credit to others by indicating who participated (even if it's your sister via email). The graded homework assignments, to be turned in at the beginning of class, will be evaluated as follows *per problem*:

5 = Entirely correct and complete. Turned in on time. Requires showing all of your work.

4 = Partially correct and/or incomplete. Turned in on time

3 = Same as 4 points, but less correct and/or less complete. Turned in on time.

2 = Same as 3 points, but less correct and/or less complete. Turned in on time.

1 = Same as 2 points, but less correct and/or less complete. Turned in on time.

0 = Anything else and/or late.

Your graded homework grade is the percentage of total points that you earn.

Oral Presentation

Toward the end of the semester, each student will present the results of their research in a 15-minute presentation. We will need to gather in the evening to do a few of these, but I will bring food and give you plenty of warning on dates & times.

The following weights will be applied in determining your final grade:

$$\text{Final grade} = .10L + .12GH + (.54/3)R_j + .04OP + .20RAP$$

where L = labs, GH = Graded Homework, OP = Oral Presentation, RAP = Regression Analysis Paper, and $R_j = \text{Review } j, j \in \{1,2,3\}$.

Grading Policy

I grade on a standard 10-point scale: A > 90, B > 80, C > 70, D > 60, F < 60, with attention given to natural breaks in the grade distribution, so that similar performances receive the same grade.

Late Work Policy

If a student is unable to take an examination or turn in a scheduled assignment, it is the **student's responsibility** to contact me prior to the scheduled completion date. No extensions will be granted for foreseen circumstances, including, but not limited to, travel for athletic teams and job interviews (assume you'll get it, and plan accordingly). Late work will be penalized 7% points *per 24 hours late* with a separate rule for the first 3 hours late. For example, if an assignment is turned in after the deadline, but within 3 hours, the penalty is 2% points per hour or part thereof. If it is more than 3 but less than 24 hours late, then the penalty is 7% points. If an assignment is turned in between 24 and 48 hours late, then the penalty is 14% points. If an assignment is turned in between 48 and 72 hours late, then the penalty is 21% points. I will not accept for grading assignments that are more than 72 hours late. Students who

miss an assignment and fail to make prior, alternative arrangements will receive a grade of zero for the assignment.

My office hours are as indicated above. However, I operate on an “open-door” policy and encourage you to stop by anytime during the day. We will work under the default attendance policy in the Davidson Catalog of Announcements, namely, missing more than one-fourth of the course meetings automatically results in a failing grade. Students are responsible for all work from all class meetings. Therefore, I expect students who miss class to ask their fellow classmates for notes and announcements I made during class.

The Honor Code is a valuable and venerable tradition at Davidson and applies to all work. In particular, electronic or hardcopy sharing of computer programs or output, for any purpose, is a violation of the Honor Code. If it is permitted on an assignment (as it is for labs, but not on exams), you may answer a classmate’s question about how to get *Stata* to do something or why your program does not work.

Textbooks

The textbook is [James H. Stock and Mark W. Watson, Introduction to Econometrics, 3rd ed., published by Addison Wesley, 2011](#) (ISBN = 978-0-13-800900-7). If you buy this book new, you will be able to access learning materials on the web. The lab book is [Lawrence C. Hamilton, Statistics with Stata \(Updated for Version 10\), published by Brooks/Cole, 2006](#) (ISBN13= 978-0495-55786-9). Both are required.

Stata/IC 11 (the “IC” or “Intercooled” version for regular size datasets up to 2,047 variables, as opposed to “Small” for small datasets, “SE” for large datasets up to 32,767 variables, or “MP” for multi-processor capability) will be available for use in the lab. If you want you can [buy a license for your own computer](#) of *Stata/IC 12* (ask me for the course id to type in) - either a 6-month license for \$65, one year license for \$98 or a perpetual license for \$179, a substantial discount from the [usual education price](#) of \$295 for a year or \$595 perpetual.

Peter Kennedy’s [A Guide To Econometrics](#) (ISBN = 978-1405182577) is a nice, recommended supplement to the textbook. It gives more intuitive explanations of concepts, with less notation and technical detail.

Prerequisites

Economics 101 (*Principles of Economics*) and Economics 105 (*Statistics*) or equivalent courses. Plus, Economics 202 (*Intermediate Microeconomic Theory*) or Economics 203 (*Intermediate Macroeconomic Theory*) is strongly recommended.

Disability Accommodations

Any student with a documented disability (e.g., physical, learning, psychiatric, vision, hearing, etc.) who needs to arrange accommodations must contact Kathy Bray in the Dean of Students office (704-894-2225) at the start of the semester. The Dean of Students office will then forward any necessary information to your professors. We can then work out the specifics for any accommodations needed for this course.