BOSTON COLLEGE

Department of Economics

ECON 2228 04: Econometric Methods, Fall 2016
Course homepage: `http://fmwww.bc.edu/EC-C/F2016/2228/`
Prof. Christopher Baum (`http://ideas.repec.org/e/pba1.html`)
Maloney Hall 388, email `baum@bc.edu` (7x24)
Lectures: O'Neill 253, MW 12:00–1:15 PM
Office Hours: M 1:30–3:30 PM, W 10:00–11:45 AM and by appt. (email)

This course is designed to introduce students to *econometrics*: the field of economics which develops the methods by which statistical tools are employed in empirical research. We will focus on estimation and inference in the context of the most widely used methodology, linear regression analysis of a single equation. Students completing the course will gain an understanding of the analytical foundations of econometric analysis as well as acquiring significant hands-on experience with data analysis and the economic interpretation of empirical findings.

ECON 2228 is a required course for the A&S Economics major. At least one semester of calculus is a required prerequisite (as it is for ECON 2201 and ECON 2202, the intermediate theory courses). An understanding of partial derivatives is valuable. ECON 2228 is the first course of a two-course sequence in econometrics offered at Boston College. The second course, ECON 3327, Financial Econometrics, is offered in the spring semester.

ECON 2228 is a four-credit-hour course, with three hours of lecture and a mandatory one-hour lab section for which you registered as ECON 2227. The lab sections involve applied work and graded homework assignments, which will be worth 20% of the course grade. You will be introduced to the Stata statistical package, available on `http://apps.bc.edu`, which has been used in ECON 1151 and ECON 2228 labs since Fall 2012. We expect that most ECON 2228 students will have taken the Economics Department's version of ECON 1151 and will already have some familiarity with Stata. For those who do not have that background, please consult your lab instructor for additional resources.

Required text/software: J.M. Wooldridge (W), *Introductory Econometrics: A Modern Approach*, (South-Western College Publishing, 5th ed., 2013) and access to the *Stata* statistical package. Stata is available to all BC community members via the BC Applications Server on `http://apps.bc.edu` using the Citrix Receiver application on your own laptop. Off-campus use requires the use of VPN on your machine (see the Help Center).
Recommended text: C.F. Baum, *An Introduction to Modern Econometrics Using Stata*, Stata Press, 2006.[1] On reserve at O'Neill Library.

Expected background: (a) Completion of ECON 1151 or ECON 1155, Economic Statistics, or equivalent (b) familiarity with the materials in W Appendices A, B, and C, which will not be covered. There are some summary notes on the material in Appendix C on the course website. If you are not fully familiar with these concepts, review the textbook appendix.

Course requirements: 35% final examination; 25% midterm examination; 20% graded homework assignments; 20% lab exercises. No makeup examinations will be given. Homework assignments in the lecture will involve both analytical exercises and some computer work. The assignments are to be your own work and will not be accepted after their due dates. You are responsible for familiarity with the University policy on academic integrity:

`http://www.bc.edu/offices/stserv/academic/integrity.html`

You are expected to attend each lecture, having adequately prepared the material to be discussed.

Software: The lab exercises and homework assignments will require you to become familiar with Stata, a general-purpose statistical package in wide use across social science and health science disciplines. The first several weeks' labs will provide you with information on the use of Stata as needed for class exercises. Stata has the same "look and feel" on all platforms on which it runs: Mac OS X, Windows, Linux, and Unix. There are extensive web-based tutorials on the use of Stata for regression analysis accessible via the course home page. There is also extensive on-line help within the program, and links from Stata's "search" command to Internet-accessible resources as well. You may submit any questions on Stata use to me via email, which I read and answer seven days a week.

[1] `http://stata-press.com/books/imeus.html`; check the Stata Press price if you're thinking of buying from Amazon or the BC Bookstore.

Tentative Schedule

Lectures	Dates	Material
1	A 29	Ch. 1: Nature of econometrics
	No lecture 7 September; lab section meets	
2, 3	A 31, S 12	Ch. 2: Simple regression model
4, 5, 6	S 14, 19, 21	Ch. 3: Multiple regression analysis: Estimation
7, 8, 9	S 26, S 28, O 3	Ch. 4: Multiple regression analysis: Inference
10, 11	O 5, 12	Ch. 6: Multiple regression analysis: Further issues
	No lecture 17, 19 Oct; lab section meets	
12	O 24	Ch. 7.1–7.4: Dummy variables I
13	O 26	**Midterm exam, Chapters 1–4, 6**
14, 15	O 31, N 2	Ch. 7.1–7.4: Dummy variables II
16, 17	N 7, 9	Ch. 8.1–8.4: Heteroskedasticity
18, 19	N 14, 16	Ch. 9.1–9.2, 9.4–9.5: Specification and data problems
20, 21, 22	N 21, 28, 30	Ch. 10, 12.1–12.5: Regression with time series data
23, 24	D 5, 7	Ch. 16.1–16.5: Simultaneous equations models
	Sat 17 Dec, 9:00-11:00 AM	**Final exam**