BOSTON COLLEGE
Department of Economics

EC 228 02: **Econometric Methods**, Fall 2009
Course homepage: `http://fmwww.bc.edu/EC-C/F2009/228/`
Prof. Christopher Baum (`http://ideas.repec.org/e/pba1.html`)
LCOB 486, `baum@bc.edu` (7x24)
Office Hours: T,Th 1:30–3:00 PM and by appt.
Tutor: Ms. Shannon Phillips
Grader: Ms. Melissa Pumphrey

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.

EC 228 is **required** for Economics majors in the class of 2013 and subsequent classes, and highly recommended for majors in the classes of 2010–2012. At least one semester of calculus is a required prerequisite (as it is for EC 201 and EC 202, intermediate theory courses). An understanding of partial derivatives is valuable. EC 228 is the first course of a two-course sequence in econometrics offered at Boston College. The second course, EC 327, Financial Econometrics, is offered only in the spring semester.

This fall's offerings of EC 228 by Prof. Baum (section 02) and Prof. Kazarosian (section 01) include an optional 4th-hour tutorial section. The one-hour tutorial will be presented three times weekly (times and rooms on the website). We will ask you to sign up for one of those three times so that we might roughly balance the number of students in each section. You are free to attend any of the three sections. The tutorial sections will help you gain familiarity with *Stata*, the statistical package employed in the course, and provide assistance with homework problems.

Required text/software: J.M. Wooldridge (W), *Introductory Econometrics: A Modern Approach*, (South-Western College Publishing, 4th ed. 2009) and access to the *Stata* statistical package, version 10.x or 11. Stata is available to all BC community members on `http://apps.bc.edu`; it may also be used in the O'Neill Library CTRC. Personal copies may also be purchased: see below regarding GradPlan options.

Recommended text: C.F. Baum, *An Introduction to Modern Econometrics Using Stata*, Stata Press (`http://stata-press.com/books/imeus.html`), 2006.[1] On reserve at O'Neill Library.

Expected background:
  (a) Completion of EC 151, Economic Statistics, or equivalent (b) familiarity with the materials in W Appendices A, B, which will not be covered. Appendix C will be briefly reviewed in lecture.

Course requirements:
  35% final examination; 30% midterm examination; 35% graded homework assignments. No makeup examinations will be given. Homework assignments, which will involve both analytical exercises and computer work, are to be your own work and will not be accepted after their due dates. You are responsible for familiarity with the College of Arts & Sciences' policy on academic integrity:

`http://www.bc.edu/offices/stserv/academic/resources/policy/#integrity`

You are expected to attend each lecture, having adequately prepared the material to be discussed. Please help us keep to the schedule by arriving and getting settled before the lecture is scheduled to commence.

Software: The homework assignments will require you to become familiar with *Stata*, a general-purpose statistical package in wide use across social science disciplines. A short tutorial on the use of Stata will be provided in class by Ms. Phillips. 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 "findit" 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.
  You may access Stata, on or off campus, from your own computer using the BC Applications Server (`http://apps.bc.edu`). Off-campus use may require the use of VPN on your machine (see the Help Center). An adequate number of copies of Stata for both Windows and Mac OS X platforms have been installed in the CTRC in O'Neill. If you would like to acquire a copy of Small Stata (the student version) for Windows, Mac OS X or Linux for your own use, you may order it through the Stata GradPlan

---

[1]Check the Stata Press price if you're thinking of buying from Amazon or the BC Bookstore.

(`http://www.stata.com/order/new/edu/gradplans/gp-campus.html`).
Materials ordered by phone or fax through the GradPlan are ready for pickup in 1–2 business days from Mrs. Tubman in the Economics office, LCOB 412B.

The student version, Small Stata, is limited in the number of observations and variables which may be analyzed, but otherwise is a full version of Stata. Stata/IC is more appropriate if you are thinking of using the software for a senior thesis project. You will need access to the Internet to work with the datasets that will be analyzed in homework assignments.

Tentative Schedule

Meetings	Dates	Material
1, 3	S 8, 15	Ch. 1: Nature of Econometrics
2	S 10	Stata tutorial (Ms. Phillips)
4, 5	S 17, 22	App. C, Mathematical statistics
6, 7, 8	S 24, 29, O 1	Ch. 2: Simple regression model
9, 10, 11	O 6, 8, 13	Ch. 3: Multiple regression analysis: Estimation
12, 13	O 15, 20	Ch. 4: Multiple regression analysis: Inference
14	O 22	Ch. 6: Multiple regression analysis: Further issues
15, 16	O 27, 29	Ch. 7.1–7.4: Dummy variables
17	N 3	**Midterm exam, Chapters 1–4, 6–7**
18, 19	N 5, 10	Ch. 8.1–8.4: Heteroskedasticity
20	N 12	Ch. 9.1-9.2, 9.4-9.5: Specification and data problems
21, 22, 23	N 17, 19, 24	Ch. 10: Regression with time series data
24, 25	D 1, 3	Ch. 12.1–12.5: Serial correlation in time series data
26, 27	D 8, 10	Ch. 15.1–15.7: Instrumental variables, 2SLS
	Mon D 21, 9:00 AM	**Final exam**