BOSTON COLLEGE

Department of Economics

EC 823: **Applied Econometrics**, Spring 2013
Course homepage: http://fmwww.bc.edu/EC-C/S2013/823/
Prof. Christopher Baum (http://ideas.repec.org/e/pba1.html)
Maloney Hall 486, email baum@bc.edu (7x24)

This course presents a number of econometric estimation techniques relevant for applied research in economics and finance and addresses the computational issues related to their implementation. It has a prerequisite of EC771 or EC772 (first-year PhD econometrics).

Required text/software: AC Cameron, PK Trivedi (CT), *Microeconometrics using Stata*, (Stata Press, revised ed., 2010) and additional readings to be posted on the course home page. Access to the *Stata* statistical package. Stata is available in the Economics computer lab (Maloney 480A) and is accessible by all BC community members on http://apps.bc.edu.

Recommended texts:
C.F. Baum, *An Introduction to Modern Econometrics Using Stata*, (http://www.stata-press.com/books/modern-econometrics-stata/), Stata Press, 2006; *An Introduction to Stata Programming*, (http://www.stata-press.com/books/introduction-stata-programming/), Stata Press, 2009.

Course requirements:
50% final examination; 50% empirical research project, including in-class presentation. Research projects are due at the time of the final examination with no exceptions. Detailed information on the research project will be provided.

To give equal preparation time to those interested in both cross-section/panel research topics and time series research topics, the coverage of time series topics will be interspersed with cross section/panel topics.

Class will not meet January 21 (Martin Luther King, Jr. Day), March 4–8 (spring vacation), March 28–April 1 (Easter vacation), April 15 (Patriots' Day).

Tentative topics to be discussed

Meetings	Dates	Material
1–9	Jan 14–Feb 13	*Cross-Section/Panel I*
		Simulation for regression and testing
		Instrumental variables techniques
		Quantile regression
		Dynamic panel data models
		General linear models
		Mixed linear models
10–20	Feb 18–Apr 3	*Time Series*
		ARIMA and ARFIMA models
		Univariate and multivariate ARCH models
		Reduced-form and structural VARs, VECMs
		State-space models
		Dynamic factor models
		Unobserved components models
21–26	Apr 8–29	*Cross-Section/Panel II*
		Propensity score matching, regression discontinuity
		Binary outcome models
		Tobit and selection models
		Count data models
		Structural equation models
27–28	May 1–3	*Project Presentations*