BOSTON COLLEGE

DEPARTMENT OF ECONOMICS

EC 327: **Financial Econometrics**, Spring 2013
http://fmwww.bc.edu/EC-C/S2013/327/
Prof. Christopher Baum
Maloney 486, email `baum@bc.edu`
Hours: M,W 1:00–2:45 PM and by appt.; email 7x24

This course builds on EC 228 to present a number of econometric techniques employed in finance and economics. These include panel data models, selected topics in time series analysis, and limited dependent variable models. Additional applications and datasets are drawn from the finance and economics literature.

Required text/software:

J.M. Wooldridge (W), *Introductory Econometrics: A Modern Approach*, Thomson, 5th ed. 2012. The 4th ed. (2009) should generally be usable, but make sure that that assigned problem numbers are the same.

Additional readings, available from the course home page in PDF.

Access to the *Stata* statistical package, version 12.x. 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 Stata GradPlan options.

Recommended text: C.F. Baum (B), *An Introduction to Modern Econometrics Using Stata*, Stata Press (`stata-press.com`), 2006. On reserve at O'Neill Library.

Expected background:

(a) Completion of EC 228, Econometric Methods, or equivalent; (b) familiarity with the materials in W Appendices A, B, C, D, E which will not be covered.

Calculus will be employed, if sparingly. An understanding of partial derivatives and matrix algebra is valuable.

Course requirements:

25% final examination; 20% midterm examination; 25% graded homework assignments; 30% empirical research project (including mandatory presentation). 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. The empirical research project will not be accepted after its due date. You are responsible for familiarity with the College of Arts & Sciences' policy on academic integrity (`http://www.bc.edu/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 which is used in all EC151 (Statistics) and EC228 (Econometrics) sections. If you did not take EC228 in Fall

2012, please see the "slide show" on the course home page. There are also 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, including hyperlinks to the full documentation set in PDF format and links from Stata's `findit` command to internet-accessible resources. You may submit any questions on Stata use to me via email, which I read and answer seven days a week, or ask them in class at any time.

You may access Stata, on or off campus, from your own computer using the BC Applications Server (`https://apps.bc.edu`). Off-campus use may require the use of VPN on your machine (see the Help Center). It is also available 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
(`http://www.stata.com/order/new/edu/gradplans/us-pickup/`).
Materials ordered by phone or fax through the GradPlan are ready for pickup in 1–2 business days and will be delivered in class.

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.

The class will meet for 27 sessions from 14 January to 1 May. A midterm exam is tentatively scheduled for Wednesday, 27 February.

Tentative Schedule

Meetings	Readings	Topics
Jan 14, 16, 23	W 13; B 9	Pooling cross sections over time
Jan 28, 30, Feb 4, 6	W 14, 16.6; B 9	Advanced panel data methods
Feb 11, 13, 18, 20, 25, Mar 11	W 17; B 10	Ltd. dependent variables, sample selection
Mar 13, 18, 20, 25, 27	W 11, 12.6	OLS with time series data, ARCH, GARCH
Apr 3, 8, 10, 17, 22	W 18, Stata `var, vec`	Advanced time series topics
Apr 24, 29, May 1		Student presentations
Thursday 9 May, 12:30 PM	Final Exam	