

# BOSTON COLLEGE

DEPARTMENT OF ECONOMICS

EC 327: **Financial Econometrics**, Spring 2008

<http://fmwww.bc.edu/EC-C/S2008/327/>

Prof. Christopher Baum

LCOB 486, 617.552.3673, [baum@bc.edu](mailto:baum@bc.edu)

Hours: TTh 1:15-2:45 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*, South-Western College Publishing, 3d ed. 2006.

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

Access to the Stata statistical package, version 9.2 or 10.0, through the CTRC or a personal copy. See course webpage regarding GradPlan purchase options.

**Recommended text:** C.F. Baum (B), *An Introduction to Modern Econometrics Using Stata*, Stata Press ([stata-press.com](http://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. A set of notes covering Appendices D, E is available on the website.

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 in wide use across social science disciplines. A tutorial on the use of Stata will be provided outside of class hours; the "slide show" on which this is based is available from the course home page. Stata has the same "look and feel" on all platforms on which it runs: Macintosh, Windows, Linux, and Unix. 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, 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, or ask them in class at any time.

An adequate number of copies of Stata for both Windows and Macintosh machines have been installed in the SLSC in O'Neill. If you would like to acquire a copy of Small Stata (the student version) or Stata/IC (the regular version) for Windows, Macintosh or Linux for your own use, you may order it through the Stata GradPlan (see course home page). Materials ordered 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. I do not recommend Small Stata to those planning on writing a senior honors thesis. You will need access to the Internet to work with the datasets that will be analyzed in homework assignments.

The class will meet for 28 sessions from 15 January 2008 and 1 May 2008. A midterm exam is tentatively scheduled for 13 March. There will be no class meeting on 7 February.

#### Tentative Schedule

Meetings	Readings	Topics
Jan 15, 17, 22, 24	W 13; B 9	Pooling cross sections over time
Jan 29, 31, Feb 5, 12	W 14, 16.6; B 9	Advanced panel data methods
Feb 14, 19, 21, 26, 28, Mar 11	W 11, 12.6	OLS with time series data, ARCH, GARCH
Mar 18, 25, 27, Apr 1, 3	W 18, Stata <code>var</code>	Advanced time series topics
Apr 8, 10, 15, 17, 22	W 17; B 10	Ltd. dependent variables, sample selection
Apr 24, 29	Notes	Duration analysis
May 1		Student presentations
Monday 12 May, 12:30 pm	Final Exam	