

ECO 2408 F1H (L0101): Econometrics (MA)

Department of Economics, University of Toronto

Fall 2012

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Office hours: Tuesday 4:30 – 6:30 pm

TA: Dimitrios Dimitropoulos
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STATA TA: Hidenori Takahashi
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Office hours: Friday 9:00 – 10:00 am in GE 40

Lectures: Tuesday 1:00 pm – 3:00 pm, Tanz Neuroscience Building 6 (lecture hall)
6 Queen's Park Cres., West
Thursday 2:00 pm – 3:00 pm, Woodsworth College 126 (119 St. George St)
Tutorials: Thursday 3:00 pm – 4:00 pm, Woodsworth College 126 (119 St. George St)

Course Description

Econometrics combines elements of economic theory, statistics, probability theory, and mathematics. The primary objective of the course is to provide students with a solid theoretical and practical foundation for the interpretation of empirical evidence in economics. As such there is a dual focus on econometric theory and “hands-on” experience working with economic data. The centerpiece of the course is an empirical term paper on a topic of the student’s choice. At the end of the course, students should be able to conduct their own empirical investigations, and critically evaluate econometric and other statistical evidence.

Textbooks

1. Jeffrey M. Wooldridge, Introductory Econometrics: A Modern Approach, Fourth Edition, 2006, Thomson / South-Western Press. ISBN-10: 0324581629 ISBN-13: 9780324581621
2. Kenneth Train, Discrete Choice Methods with Simulation, Second Edition, 2009, Cambridge University Press, available at <http://elsa.berkeley.edu/books/choice2.html>
3. Ruey S. Tsay, Analysis of Financial Time Series, Second Edition, 2005, Wiley, available at <http://simplelink.library.utoronto.ca/url.cfm/167190>

Software

The course involves a considerable amount of computing, and students must learn and use a sophisticated statistical software package. STATA is highly recommended, and is the only package that will be supported by the instructor and TAs. Students should purchase **Intercooled Stata 12.0**, available online at: <http://www.stata.com/order/new/edu/gradplans/cgpcampus-order.html> While orders are placed online, you will pick up your software at the Software Licensing Office in the Information Commons at Robarts Library: <http://www.utoronto.ca/ic/software/detail/stata.html>

Course Website

The course website on Blackboard is accessible through: <https://portal.utoronto.ca>

We will be using Blackboard to manage class communications, distributing problem sets, the accompanying data, outlines of the lectures, etc. It is important that you regularly check the announcements posted there.

A front-cover page containing basic course information and link to the Blackboard course website is at: <http://www.economics.utoronto.ca/mburda/teaching/ECO2408-12/>

Email Policy

Email is not the appropriate forum for discussing the details of econometrics – the office hours have been scheduled for this purpose. Email can be helpful on occasion, and within limits. Accordingly, I will endeavor to reply to email within 24 hours, except weekends, with the following provisions:

- The question should require a one (or two) sentence response (maximum). If it takes more, office hours are the more appropriate venue;
- I will not answer questions concerning STATA or computing. Such questions should be directed towards the STATA TA;
- It is strongly preferable that you use a utoronto email address: my spam filter is set to maximum;
- Please do not send attachments of any kind;
- The TA and STATA TA has allocated weekly time to respond to emails.

Evaluation

The final grade is based on the following:

Task	Weight	Due date
Midterm exam	25%	October 18, 2012
Term Paper	35%	December 4, 2012
Final Exam	40%	Final Exam Period (Dec 5-21)

The **midterm** will take 1 hour, short-answer format.

- A grade of zero will be given to students who do not write the test, unless an appropriate note is received within one week of the missed test explaining why the test was missed. The note must state that on the date of the test, the student was too sick to write the test. Only original notes will be accepted. It is an academic offence to feign illness to avoid a test.
- If a student has been excused from a test on medical grounds, he or she will be permitted to write a **make-up test** to be held on Tuesday, October 23, at 4:30 pm in GE 234. Consistent with university policy, there is no “make-up” test for the make-up test. A grade of zero will be applied if the make-up test is requested but missed.
- If students wish to appeal a grade, they must provide a written explanation of why they believe their grade is mistaken, and submit it to me within one week of the midterm being returned to the class.

The **final exam** will take 2 hours, short answer format. The applicable rules and regulations of the Graduate School and the Department of Economics govern its conduct.

Problem sets will be distributed throughout the semester, and form the basis of the tutorials. They will consist of both theoretical and computer- based problems. The problems sets will not be graded, but serve to prepare students for the graded components of the course (midterm and final exam).

Term Paper will be assigned in more detail during the semester. It will entail an empirical investigation of a question in economics and a critical reading of relevant articles related to the question. It must be no longer than 15 pages in length (double-spaced). An outline (statement of topic) is due on October 25. I strongly encourage students to work in pairs. If you wish instead, you can work alone. The maximum group-size is two.

Disclaimer concerning Turnitin.com:

Students agree that by taking this course all required papers will be subject to submission for textual similarity review to Turnitin.com for the detection of plagiarism. All submitted papers will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com web site.

Accessibility Needs: If you require accommodations for a disability, or have any accessibility concerns about the course, the classroom or course materials, please contact Accessibility Services as soon as possible: disability.services@utoronto.ca or <http://studentlife.utoronto.ca/accessibility>.

Planned Coverage

week	Day	Date	Topic	Material
1	Tue	Sep 11	Introduction; Review of statistics	syllabus; App B, C
	Thu	Sep 13	Review of statistics	App C5, C6
2	Tue	Sep 18	Matrix algebra; Term paper discussion	App D; guidelines
	Thu	Sep 20	SR	Ch 2
3	Tue	Sep 25	MR: estimation	Ch 3
	Thu	Sep 27	MR: inference	Ch 4
4	Tue	Oct 2	MR: asymptotics, bootstrap	Ch 5
	Thu	Oct 4	MR: further issues	Ch 6
5	Tue	Oct 9	MR: qualitative info, heterosked	Ch 7, 8
	Thu	Oct 11	Instrumental variables and 2SLS	Ch 15
6	Tue	Oct 13	Instrumental variables and 2SLS	Ch 15
	Thu	Oct 18	<i>midterm exam</i>	
7	Tue	Oct 23	MLE	slides
	Thu	Oct 25	Discrete choice	slides
8	Tue	Oct 30	Individual heterogeneity	slides
	Thu	Nov 1	Endogeneity	slides
9	Tue	Nov 6	Time series	Ch 10
	Thu	Nov 8	Time series	Ch 11
	Tue	Nov 13	no classes - Fall break	
10	Thu	Nov 15	Time series	Ch 12
	Tue	Nov 20	Panel data	Ch 13
11	Thu	Nov 22	Panel data	Ch 14
	Tue	Nov 27	Panel data	slides
12	Thu	Nov 29	Advanced time series (ARMA, GARCH)	slides
	Tue	Dec 6	Advanced time series (ARMA, GARCH)	slides
Final exam period			<i>final exam</i>	

Note: "Material" refers to Wooldridge. Sections of the Train and Tsay texts will be assigned in due course. SR = simple regression, MR = multiple regression.