ECO 2408 F1H (L0101): Econometrics (MA)

Department of Economics, University of Toronto

Fall 2017

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Lectures: Monday 1:00 pm – 3:00 pm, BA 1200
    Wednesday 2:00 pm – 3:00 pm, BA 1200
Tutorials: Wednesday 3:00 pm – 4:00 pm, BA 1200

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.

Prerequisites

Students are expected to have taken ECO1010 or ECO1011 before taking this course.

Textbooks

Main texts:
- Verbeek, M., *A Guide to Modern Econometrics*, 2012, Wiley.
- Koenker, R., *Quantile Regression*, 2005, Cambridge University Press.
  Available online with UofT library login at https://doi.org/10.1017/CBO9780511754098.002

Reference text:
- Greene, W. H., *Econometric Analysis*, 7th ed, 2012, Pearson.

Software

For empirical exercises and the Term Paper students can choose any software package they like, e.g. Stata, R, Matlab, etc. Stata can be obtained at http://sites.utoronto.ca/ic/software/detail/stata.html. R is available at https://www.r-project.org/.

Course Website

The course website on Blackboard is accessible through: https://portal.utoronto.ca
We will be using Blackboard to manage class communications, problem sets, the accompanying data, outlines of the lectures, etc. It is important that you regularly check the announcements posted there.

Evaluation

The final grade is based on the following:

Task	Weight	Due date
Midterm exam	30%	October 25, 2017
Term Paper	30%	December 7, 2017
Final Exam	30%	Final Exam Period
Problem Sets	10%	As assigned during the semester

The **midterm** will be 2 hours, 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**. 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 the instructor with a written explanation within one week after the midterm is 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.

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 (1.5 spacing). Students can work in pairs or alone. The maximum group-size is two.

Disclaimer concerning Turnitin.com:
In ECO2408 we will be using turnitin.com. Normally, students will be required to submit their course essays to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. 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.

Tentative Course Coverage:

Week	Day	Date		Topic
1	Mon	Sep	11	1. Syllabus; 2. Statistical Background
	Wed	Sep	13	3. Multiple Regression in Matrix Algebra
2	Mon	Sep	18	4a. Quantile Regression; *Term Paper discussion*
	Wed	Sep	20	4b. Quantile Regression Applications
3	Mon	Sep	25	5a. Endogeneity: Experiments and IV
	Wed	Sep	27	5b. IV Applications
4	Mon	Oct	2	6a. Endogeneity: GIVE / 2SLS
	Wed	Oct	4	6b. 2SLS Applications
5	Mon	Oct	9	*Thanksgiving, U of T closed*
	Wed	Oct	11	7. TS Dependence
6	Mon	Oct	16	8a. Nonlinear Model Estimation and Testing
	Wed	Oct	18	8b. Nonlinear Model Applications
7	Mon	Oct	23	*review*
	Wed	Oct	25	*midterm exam*
8	Mon	Oct	30	9a. Panel Data 1 (FE, DiD, RE)
	Wed	Nov	1	9b. Panel Data 1 Applications
9	Mon	Nov	13	10a. Panel Data 2 (HT, CRE, PP)
	Wed	Nov	15	10b. Panel Data 2 Applications
10	Mon	Nov	20	11a. Dynamic Panel Data
	Wed	Nov	22	11b. DPD Applications
11	Mon	Nov	27	12a. ARMA
	Wed	Dec	29	12b. ARMA Applications
12	Mon	Dec	4	13a. Cointegration, VAR, VEC
	Wed	Dec	6	13b. Cointegration, VAR, VEC Applications
13	Thu	Dec	7	*review*
Final exam period				*final exam*