

ECONOMETRICS II, ECON 472:20
Department of Economics
St. Francis Xavier University
Winter 2024

Instructor: Teng Wah LEO

Time Blocks and Location: W7/W8 (Monday, 4 p.m.–5:15 p.m.; Wednesday, 2:30 p.m.–3:45 p.m.) at Mulroney Hall, MULH4022

Office Hours: Mondays from 12 p.m.–2 p.m. & Wednesdays from 10 a.m.–1 p.m at Mulroney Hall, Room 3073. All other times, by appointment only.

Objective:

The course is designed to introduce more Econometric Theory to the Introductory course in Econometrics to provide a basis for the student to utilize more advance econometric techniques. Emphasis will be placed on more in depth technical detail, such as solving for the Ordinary Least Squares solution using Matrix Algebra, which would allow the student to write dedicated computer programs in MATLAB. The rigour is also meant to provide a strong grounding to the student for analyzing problems in empirical work both regarding technical problems and that associated with inference. **Prerequisite: ECON 371.**

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Drop-Date:

Students may drop a course, online in Banner, on or before **March 8th, 2024**. After this date students are not permitted to drop courses without permission from their Dean. (Please see 3.1 in academic calendar for policy regarding course drops).

Evaluation:

There will be 4 equally weighted **take-home** tests, each of which will include both theoretical, and applied elements. Each of the take-home tests is worth 15%, for a total of 60% of your final grade. It is recommended that assignments be typed using L^AT_EX. There will be one midterm test on the 4th March 2024, and a final examination, each worth 20%.

Note: All tests and examinations are compulsory. Should you miss an examination/test without an appropriate reason provided prior to the date of the examination/test at the latest, you will be awarded a mark of zero for that examination/test. There is no recourse after the fact.

Equitable Learning: Everyone learns more effectively in a respectful, safe, and equitable learning environment, free from discrimination and harassment. I invite you to work with me to create a classroom space – both real and virtual – that fosters and promotes values of human dignity, equity, non-discrimination, and respect for diversity.

Required Text:

- Jeffrey M Wooldridge. 2015, *Introductory Econometrics: A Modern Approach*, South-Western College, 6th edition.

Supplementary Reading:

- James G MacKinnon and Russell Davidson. 2003, *Econometric Theory and Methods*, Oxford University Press.
- **(CB)** Christopher F. Baum. 2006, *An Introduction to Modern Econometrics Using Stata*, Stata Press.
- **(SB)** Sean Beckett. 2013, *Introduction to Time Series Using Stata*, Stata Press.

Course Outline:

1. Matrix Representation of OLS and MATLAB
2. Programming in MATLAB
3. Method of Moments & Maximum Likelihood Estimation
4. Measurement Error Revisited
5. Instrumental Variable Estimation and Two Stage Least Squares
6. Limited Dependent Variable
7. Introduction to Time Series Analysis
8. More Time Series Analysis