

## ECO475, Applied Econometrics II, Winter 2024

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<b>Lecture:</b>	Thursday 10 am - noon, SU444
<b>Tutorial:</b>	Friday 11am, SU444
<b>Instructor:</b>	Yuanyuan Wan
<b>Phone:</b>	416-978-4964
<b>Email:</b>	<a href="mailto:yuanyuan.wan@utoronto.ca">yuanyuan.wan@utoronto.ca</a>
<b>Instructor Office Hours:</b>	Tuesday 10am @ GE232
<b>TA:</b>	Chenyue Liu
<b>Teaching Assistant Email:</b>	<a href="mailto:chenyue.liu@mail.utoronto.ca">chenyue.liu@mail.utoronto.ca</a>
<b>TA Office Hour:</b>	Friday 10-11am, SU440

### Course Description

This course is an introduction to advanced micro-econometrics. The course discusses econometrics models that are intensively used in empirical research from both statistical foundation and application perspectives. In this course, we will focus on empirical scenarios with cross-sectional or longitudinal data. Students will learn how to address economic questions empirically.

### Textbook

- 1) A. C. Cameron and P.K. Trivedi, "*Microeconometrics*," Cambridge University Press. ISBN: 9780521848053
- 2) A. C. Cameron and P.K. Trivedi, "*Microeconometrics Using STATA*", STATA Press

### Previous Training:

Prerequisites: ECO375 (70%) / ECO374 (80%). NOTE: STA302H1 is not accepted preparation.

Prerequisites are strictly checked and enforced and must be completed **BEFORE** taking a course. It is the student's responsibility to check the prerequisites before enrolling in any course. By taking this course, you acknowledge that you will be removed from the course at any time if you do not meet all requirements set by the Department of Economics. See Faculty of Arts and Science Calendar for details. The instructor does not have any authority of waiving prerequisites.

### Software

**Stata SE.** Some of the earlier versions can also be used. The course involves a considerable amount of computing, and students must learn and use a sophisticated statistical software package. STATA is the *only* package that will be supported by the instructor and TA's. Other software is allowed but may not be supported by TA.

Students can purchase STATA at discounted prices. See the following website for details:  
<https://mdl.library.utoronto.ca/technology/statistical-software>.

## Course Website

The Quercus site will also be used manage class communications. Course materials will be uploaded to the Quercus. Check the announcements posted there regularly.

## Score Policy

The final mark of this course is based on three parts: graded homework, term paper (proposal and completed paper), and final exam. The weights are shown in the table below.

### Graded homework (20%)

There will be two graded homework, each count for 10% of the course grades. Homework must be submitted to Quercus in PDF file format. If the homework involves empirical work, Stata log files should be submitted too.

Late homework receives a 20% penalty for each day of the lateness unless a valid justification is received by the instructor prior to the deadline. If a student indeed misses the due date of the homework with legitimate reasons, he or she must submit the homework within 72 hours of the original due date to get a full mark. Otherwise, the 20%/day penalty will be applied.

### Term Paper (5%+10%+35%)

Students will submit a term paper proposal (5%), make the oral presentation (10%) in class, and submit a completed version of the term paper (35%). Students can work in groups with up to three group members and must notify the instructor the group member names by **January 20<sup>th</sup>**. In the term paper, students will need to identify and answer an empirical question in economics using the methods they learn from this course. Please see the separate document for more details about requirements and tips.

The proposal is due by the end of **February 1<sup>st</sup>**. The penalty for each day of the lateness is 20% of the original proposal mark. For example, if a student score 5 out of the total 5 points for his/her term proposal, but submit it two days later than the due date, then his/her mark for the term proposal is  $5 \cdot (1 - 2 \cdot 20\%) = 3$ .

The complete version of the term paper is due by the end of **April 15<sup>th</sup>**. The penalty for each day of the lateness is 20% of the original term paper mark. For example, if a student score 30 out of the total 35 points for his/her term paper, but submit it two days later than the due date, then his/her mark for the term paper is  $30 \cdot (1 - 2 \cdot 20\%) = 18$ .

Each student of the group shall present a part of their term paper **in class**. For example, a three-student-group can split the presentation by “literature review + econometric methods + empirical findings”. The presentation slides must be submitted to the instructor one week before the presentation date. A presentation slot registration link will be distributed to the class. All the groups/individual students have opportunities to present, but the slots are offered as “first come, first served”.

Students who work in groups will receive the same marks for their proposals, presentation, and final papers.

### Final Assessment (30%)

We have a final exam for this course. I will discuss more details before the exam. University rules for missing a final exam applies.

### Key Dates

Tasks	Weights	Due Dates
<b>Homework</b>	20%	TBA
<b>Group member names</b>		January 20 <sup>th</sup>
<b>Term Paper Proposal</b>	5%	February 1 <sup>st</sup>
<b>Term paper Presentation</b>	10%	March 28 <sup>th</sup> and April 4 <sup>th</sup>
<b>Term Paper Full Version</b>	35%	April 15 <sup>th</sup>
<b>Final Exam</b>	30%	TBA
<b>Total</b>	<b>100%</b>	

### Planned Course Outline

The following is the planned course outline (subject to minor changes). Students are recommended to preview the corresponding chapters before lectures.

Lectures	Date	Course materials	Reference
Lecture 1	Jan 11	Syllabus and binary response models	Chapter 14
Lecture 2	Jan 18	Binary and multinomial models	Chapter 14, 15 and Notes
Lecture 3	Jan 25	Multinomial models	Chapter 15 and notes
Lecture 4	Feb 01	Linear panel data	Chapter 21 and notes
Lecture 5	Feb 08	Potential outcome model	Chapter 25 and notes
Lecture 6	Feb 15	IV and LATE	Chapter 25 and notes
	<b>Feb 22</b>	<b>Reading week</b>	
Lecture 7	Feb 29	Difference in differences	Chapter 25 and notes
Lecture 8	Mar 07	Regression discontinuity	Chapter 25 and notes
Lecture 9	Mar 14	Matching estimation	Chapter 25 and notes
Lecture 10	Mar 21	Roy model and selection	Chapter 16
Lecture 11	Mar 28	Term paper presentation	
Lecture 12	Apr 04	Term paper presentation	
	<b>TBA</b>	<b>Final exam</b>	

### Course Policy

#### Grade Dispute

Requests for re-grading homework and/or exams must be submitted to instructor in writing within one week that the exam and/or homework are returned. The instructor will re-grade the whole problem set and/or exam instead of a single question to ensure the consistency.

## Academic Honesty and the Use of Turnitin.com

Academic integrity is a fundamental value essential to the pursuit of learning and scholarship at the University of Toronto. Participating honestly, respectfully, responsibly, and fairly in this academic community ensures that the U of T degree that you earn will continue to be valued and respected as a true signifier of a student's individual work and academic achievement. As a result, the University treats cases of academic misconduct very seriously. The University of Toronto's Code of Behavior on Academic Matters outlines the behaviors that constitute academic misconduct, the processes for addressing academic offences, and the penalties that may be imposed. You are expected to be familiar with the contents of this document. Potential offences include, but are not limited to:

For term paper papers:

- Using someone else's ideas or words without appropriate acknowledgement.
- Submitting your own work in more than one course without the permission of the instructor.
- Making up sources or facts.
- Obtaining or providing unauthorized assistance on any assignment (this includes working in groups on assignments that are supposed to be individual work).

For the final assessment:

- Using or possessing any unauthorized aid, including a cell phone.
- Looking at someone else's answers.
- Misrepresenting your identity.
- Submitting an altered test for regarding.

Misrepresentation:

- Falsifying institutional documents or grades.
- Falsifying or altering any documentation required by the University, including (but not limited to) doctor's notes.

All suspected cases of academic dishonesty will be investigated following the procedures outlined in the Code of Behavior on Academic Matters. If you have any questions about what is or is not permitted in this course, please do not hesitate to contact me. If you have questions about appropriate research and citation methods, you are expected to seek out additional information from me or other available campus resources like the College Writing Centers or the Academic Success Centre.

We will use Turnitin.com in this course. Students must submit this assignment by the due date to Turnitin.com for a textual similarity review. *"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"*. Students who do not agree with the submission of their paper to Turnitin.com must contact the instructor in the first week of this course.

## Email Policy

I will reply to emails within 24 hours, except on weekends and holidays, 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 reply to emails concerning grading. For such matters, office hours are more appropriate.

- It is also (strongly) preferable that you use the University of Toronto email addresses: my spam filter is set to maximum. Moreover, university policy stipulates a preference for these email addresses.
- Always identify yourself, course, and section in your email.
- Please do not send attachments of any kind.
- Please do not submit term work by email.
- The teaching assistant has one email-hour per week to reply course related questions.

## **Accessibility Needs**

The University of Toronto is committed to accessibility. 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](mailto:disability.services@utoronto.ca) or <http://studentlife.utoronto.ca/accessibility>.

## **Data Source**

1. University of Toronto Map and Data Library: <https://mdl.library.utoronto.ca/>
2. Panel Study of Individual Dynamics: <https://psidonline.isr.umich.edu/>