GORDON S.
LANG
SCHOOL *of* BUSINESS AND ECONOMICS

ECON6160: Econometrics II
Winter 2025
0.5 Credits

General Course Information

Instructor: Professor Yiguo Sun

Email yisun@uoguelph.ca
Office Location 709 MacKinnon
Office Hours 9:00am-5:00pm on Tuesdays, otherwise emails and Teams communications are preferred
Department/School Department of Economics and Finance

Class Schedule:
Tuesdays & Thursdays; 10:00AM - 11:20AM; MCKN 059

Pre-requisites:

Restrictions:

Course Description

The course is available to graduate students who possess a thorough understanding of basic probability and statistical concepts and are well-versed in the classical linear regression model. The topics covered encompass linear quantile regression models, the general method of moments for estimation and inference, panel data models, seemingly unrelated models, simultaneous equations models, and limited-dependent-variable models. If time permits, we'll briefly explore social network analysis and spatial regression models.

Course Learning Outcomes

Upon successfully completing this course, you will:

Knowledge and Understanding:

1) A comprehensive grasp of commonly used econometric models, including GMM estimation and GMM-based test statistics.
2) In-depth knowledge of various econometric models used to analyze economic data, including linear quantile regression, panel data models, simultaneous equations models, limited-dependent variable models.

3) Skills to critically assess the assumptions, limitations, and applicability of different econometric models in various economic scenarios.
4) Proficiency in utilizing R for statistical analysis purposes.

Discipline/Professional and Transferable Skills:

5) Enhances skills in statistical analysis, econometric modeling, and data interpretation, which are crucial in various professions such as economics, finance, and policy analysis.
6) Provides hands-on experience in programming languages like R, Python, or MATLAB, which are valuable and transferable skills in diverse industries requiring data analysis and modeling.
7) Develops analytical thinking and problem-solving skills, essential for tackling complex economic issues by applying econometric methods to real-world data.
8) Equips students with the ability to adapt to new statistical methods, economic theories, and technological advancements in the field of econometrics and data analysis.

Attitudes and Values

9) Encourages a commitment to meticulous analysis and inquiry into economic data, fostering an attitude of thoroughness and accuracy in research and interpretation.

10) Emphasizes the importance of integrity in data analysis and interpretation, cultivating values of honesty and ethical conduct in academic and empirical research.

Promotes critical evaluation of economic models and data, encouraging a mindset that questions assumptions and seeks a deeper understanding of underlying economic phenomena.

Summary of Course Content and Materials

(1) Basic distribution theory
(2) Linear quantile regression models
(3) The generalized method of moments (or GMM)
(4) Panel data models and seemingly unrelated models
(5) Simultaneous equations models
(6) Limited dependent variable models
(7) Social network analysis
(8) Spatial regression models

Course Assessment

			Associated Learning Outcomes	Due Date/ location
Assessment 1:	*15%*	*Three assignments*	*Econometric theory and Computer skills*	*TBA/ In class*
Assessment 2:	*25%*	*Midterm exam*	*Econometric theory*	*Feb. 13/ In class*

| Assessment 3: | *60%* | *Final Exam* | *Econometric theory* | TBA |

100%
Total

Lectures   I will deliver two lectures per week.

Course Resources

Required Text: I will upload my lecture notes to the course link.

Recommended Text:

1. (G) Greene, William H., 2018. *Econometric Analysis.* 8th edition. Pearson Education (Prentice Hall).

2. Poirier, Dale, J., 1995. Intermediate Statistics and Econometrics: A Comparative Approach. The MIT Press. *2-hour reservation at the library.*

3. Lee, Ljung-Fei, 2023. Spatial Econometrics: Spatial Autoregressive Models. Free downloadable pdf file from our university's library.

Course Policies

Grading Policies

Unless you have discussed an extension well ahead of the due date with the instructor, late penalties of 5% of the total grade earned per day (including weekends) will be assigned to any assessment (i.e. deducted from the total mark). Extensions will only be granted on the basis of valid medical or personal reasons, and need to be requested via email to the instructor as soon as possible. Late assignments will not be accepted once graded assignments have been returned officially to the class at large, unless circumstances permit and alternative arrangements have been made.

Students who find themselves unable to meet course requirements by the deadlines or the criteria expected because of medical or personal reasons, should review the regulations on academic consideration in the Academic Calendar and discuss their situation with the instructor, program counselor or other academic counselor as appropriate.

Missed Assignments:

There won't be a makeup midterm exam. In case you're unable to take the midterm on schedule, the 25% weight will be transferred to your final exam.

A grade of zero will be assigned if you fail to submit an assignment, unless you are ill or have other compassionate reasons. Please read your Undergraduate Calendar for the regulations regarding illness and compassionate grounds. Please note, vacation travel, moving house, or outside work commitments will not be accepted as valid reasons for missing deadlines.

If you have religious observances which conflict with the course schedule or if you are registered with Student Accessibility Services, please contact the course instructor in order to make arrangements for your assessment if appropriate.

University Policies

Academic Consideration

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor in writing, with your name, id#, and e-mail contact. See the academic calendar for information on regulations and procedures for Academic Consideration:

https://www.uoguelph.ca/registrar/calendars/graduate/current/

Academic Misconduct

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community, faculty, staff, and students to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring.

University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection. Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The Academic Misconduct Policy is detailed in the Graduate Calendar:

https://calendar.uoguelph.ca/graduate-calendar/general-regulations/academic-misconduct/

Accessibility

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact Student Accessibility Services as soon as possible.

For more information, contact SAS at 519-824-4120 ext. 56208 or email sas@uoguelph.ca or see the website: https://wellness.uoguelph.ca/accessibility/

Course Evaluation Information

Please refer to the Blue by Explorance system.

Recording of Materials

Presentations which are made in relation to course work—including lectures—cannot be recorded or copied without the permission of the presenter, whether the instructor, a classmate or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

Drop date

The last date to drop one-semester courses, without academic penalty, is **Friday, April 4, 2025** For regulations and procedures for Dropping Courses, see the Academic Calendar:

https://calendar.uoguelph.ca/graduate-calendar/general-regulations/