

University of Waterloo
Department of Economics
Econ 622/722: Applied Microeconometrics
Winter 2020

Instructor Information

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Course Information: Mondays & Wednesdays, 8:30am-9:50am in HH
Office Hours: Mondays & Wednesdays: 10am-11:30am

Course Description, Goals and Learning Outcomes

This course presents empirical methods relevant to the analysis of cross-sectional and longitudinal micro-data and have applications in the fields of labour economics, health economics, industrial organization and environmental economics. The objectives of the course are to learn about the various methods used in applied microeconomics research and to provide practical experience applying these methods using a statistical software package.

Prerequisites: Econ 621

Readings

Cameron, C. and P. Trivedi, Microeconometrics: Methods and Applications, New York: Cambridge University Press, 2005.

Wooldridge, Jeffrey M., Econometric Analysis of Cross Section and Panel Data (2nd ed.), Cambridge: MIT Press, 2010.

Outline of Topics and Associated Book Chapters

Data Issues Collecting, describing, and formatting data	CT 3, 9, 24, 27
Specification Issues Linear and nonlinear models and associated estimation methods: OVB and measurement errors in the linear model, non linearities, interactions Limited Dependent Variable and non random selection models	CT 4, 5, 8, 26 W 4, 6, 15, 16
Identification Strategies Randomized Treatments and DID estimation Endogenous Treatments and IV, Heckman Selection, and GMM estimations	CT 6, 25 W 5, 18
Further Topics Panel Data analysis: Fixed-effect, Random-effect, Dynamic Panel Data Estimation Introduction to Survival Analysis/Machine Learning	CT 21, 22, W 10, 11, 13 CT 17 - W 20

Course requirements

Econ 622: There will be 1 midterm during the semester, 2 assignments and a final exam.

Econ 722: In addition to the Econ 622 requirements, students will be asked to summarize and present articles (list provided during the first week of class) and to write a term paper. Furthermore, there will be final exam questions for PhD students specifically related to the articles presented.

Term Tests

The first midterm will be held on **Wednesday Feb the 12th** and the second one on **Monday March the 9th**. Both tests will take place during class hours in the usual classroom.

Assignments

There will be 2 assignments which will consist in performing a combination of computer and theory based exercises. Group work is welcome but the assignment needs to be written and submitted individually and include (for computer exercises) the code that generated the results. The term paper for the PhD students is due on the last day of class.

Final Exam

A final examination will be given during the Winter Term and will cover the entire term's material with more emphasis on the last part of the course (since the midterm test).

PhD additional requirements

PhD students will be asked to choose research articles on methods of their choice, summarize them in writing and present them in class.

The term paper will be about all the steps executing the main estimation technique associated with an economic question and interpreting the results. Students are responsible for finding the data, come up with the main question and the appropriate estimation method. Details about the format of the term paper will be given in class.

On the final exam, there will be additional questions related to the student's articles presented in class.

Course Assessment

The course grade for MA students will be computed based on the following weighting scheme:

2 Assignments	20% (10% each)
2 Term tests	30%
Final Exam	50%

For PhD students, the weighting scheme will be:

2 Assignments	20%
2 Term tests	20%
Final Exam	30%
Article & presentation	10%
Term paper	20%

Missed Tests/Final Exam

There is no make-up for the term tests. A student who is ill and misses the test needs to provide appropriate medical documentation (no photocopies, *only original documents*) to **me within 48 hours of the missed test**. If the appropriate documentation has been submitted on time, the weight of the test will be shifted to the final exam's weight. Under no circumstances will the weight of the term tests or final exam be shifted to the term paper.

Grading Policy

Students who would like their test or assignments regraded need to ask the instructor immediately after the test or assignment has been given back. The regrading will apply to the entire test and may not automatically result in a higher grade than before.

Late Work

Assignments submitted late will receive a daily penalty of 15%. Assignments submitted after I have done the correction in class will receive a grade of 0.

Electronic Device Policy and Classroom Expectations

Turn off and do not answer your cell phone. Laptop computers are not permitted in class unless the student can show that it is used for the purpose of notes taking.

Academic Integrity

Academic Integrity: In order to maintain a culture of academic integrity, members of the University of Waterloo are expected to promote honesty, trust, fairness, respect and responsibility. See the [UWaterloo Academic Integrity](#) webpage and the Arts [Academic Integrity](#) webpage for more information.

Discipline: A student is expected to know what constitutes academic integrity, to avoid committing academic offences, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about “rules” for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. When misconduct has been found to have occurred, disciplinary penalties will be imposed under [Policy 71 – Student Discipline](#). For information on categories of offenses and types of penalties, students should refer to Policy 71 - Student Discipline. For typical penalties check [Guidelines for the Assessment of Penalties](#).

Grievance: A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read [Policy 70 - Student Petitions and Grievances](#), Section 4. When in doubt, please be certain to contact the department’s administrative assistant who will provide further assistance.

Appeals: A decision made or penalty imposed under Policy 70 - Student Petitions and Grievances (other than a petition) or Policy 71 - Student Discipline may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to [Policy 72 - Student Appeals](#).

Accommodation for Students with Disabilities

Note for students with disabilities: [The AccessAbility Services office](#), located on the first floor of the Needles Hall extension (1401), collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the AS office at the beginning of each academic term.

Mental Health Support

All of us need a support system. The faculty and staff in Arts encourage students to seek out mental health supports if they are needed.

On Campus

- Counselling Services: counselling.services@uwaterloo.ca / 519-888-4567 ext 32655
- **MATES**: one-to-one peer support program offered by Federation of Students (FEDS) and Counselling Services
- Health Services Emergency service: located across the creek from Student Life Centre

Off campus, 24/7

- **Good2Talk**: Free confidential help line for post-secondary students. Phone: 1-866-925-5454
- Grand River Hospital: Emergency care for mental health crisis. Phone: 519-749-433 ext. 6880
- **Here 24/7**: Mental Health and Crisis Service Team. Phone: 1-844-437-3247
- **OK2BME**: set of support services for lesbian, gay, bisexual, transgender or questioning teens in Waterloo. Phone: 519-884-0000 extension 213

Full details can be found online at the Faculty of ARTS [website](#) Download [UWaterloo and regional mental health resources \(PDF\)](#) Download the [WatSafe](#) app to your phone to quickly access mental health support information

Territorial Acknowledgement

We acknowledge that we live and work on the traditional territory of the Attawandaron (Neutral), Anishinaabeg and Haudenosaunee peoples. The University of Waterloo is situated on the Haldimand Tract, the land promised to the Six Nations that includes ten kilometers on each side of the Grand River.