

University of Waterloo
Department of Economics
ECON 322-001
Econometric Analysis 1
Winter 2020
11:30am-12:50pm Monday, Wednesday, EV3 1408

Instructor: Kate Rybczynski

Office: 210 Hagey Hall

Office Hours: 2:30-3:30 pm, Monday, Wednesday, or by appointment

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Web Page: <http://www.arts.uwaterloo.ca/~krybczyn/322/>

(This web page is password protected, attend the first class, check learn, or e-mail me for the password)

Tutorial Sessions: All tutorials are held in PAS 2037

2500 TUT 101 2:30-3:20pm Thursdays

2501 TUT 102 3:30-4:20pm Thursdays

2502 TUT 103 4:30-5:20pm Thursdays

Course Description:

This course covers the core tools needed to estimate linear models using ordinary least squares and to interpret estimates for cross-sectional data. Students will learn to interpret the coefficients of linear models for continuous and discrete regressors, to conduct reliable inference for different specifications of the error term, and to understand the advantages and limitations of each econometric technique. Students will also be introduced to two statistical software packages and will be required to complete regular computer-based assignments throughout the course. These assignments are aimed to provide hands on experience working with social sciences data, understanding the statistical properties of the data, and estimating and reporting on estimated parameters in linear regression models.

Course Goals and Learning Outcomes:

ECON 322 covers the tools needed for proficient empirical analysis. Students will learn to construct and work with linear regression models, to understand the scope and limitations of these models, and to interpret and explain the results of these models. Upon completion of this course, students should be able to:

- Present and interpret basic statistical properties of a variety of data sets and the variables contained therein.
- Conduct linear regression analysis.
- Present and interpret the estimated coefficients of linear regression models.
- Describe the scope and limitations of these models.

Text:

- The text book for this course is Introductory Econometrics, a Modern Approach, 7th Edition, by Jeffrey Wooldridge. A previous edition of the text is on reserve at Dana Porter Library. I have placed an additional text on reserve for your reference (Introduction to Econometrics by Stock and Watson).

Resources Available On Line:

- Lecture slides
- Announcements
- Study Questions
- LEARN – password for course website & communication

Course Requirements and Assessment:

<i>Assessment</i>	<i>Date & Location</i>	<i>Weighting</i>
Assignments	weekly	20%
Term Test 1	February 5, in class	20%
Term Test 2	March 4, in class	20%
Final Exam	TBD	40%
Total		100%

Course Outline:

Week	Topic	Readings
1-3	Introduction & Review -Math, Probability, & Stats Review -Goals of Econometrics -Data Types	Appendices & Chapter 1
4-9	Regression Analysis -Simple Regression Model -Multiple Regression Model -Inference	Chapters 2,3,7,4,6
9-11	Issues in Regression Analysis -Specification Issues -Multicollinearity -Heteroskedasticity -Autocorrelation -Data Issues -Sample Selection	Chapter 3,8,6,9
12-13	Instrumental Variables -Selection and Omitted Variable -Bias -Measurement Error -Instrument Validity	Chapter 15

ECON 322 Policies:***Assignments-***

- Assignments will be posted on-line one week before they are due.
- Assignments must be submitted on LEARN (for your specific tutorial session) by Thursday at 2pm.
- Although students are encourage to work together, each student must submit their own assignment with individualized answers. Any two or more students who submit identical assignments are in violation of Policy 72 and disciplinary measures may be imposed under Policy 71 (see below).
- Late or missing assignments will receive a grade of zero, with the exception of approved medical documentation. The instructor retains the right to accept non-medical documents at their discretion.
- Assignment grades will be available via each student's individual LEARN.

Attendance -

- Attending classes and tutorials, asking relevant questions, and participating in the class improves understanding of the course material for you and for your classmates. Note: when interacting, I expect that you treat everyone with respect and are supportive of the learning environment.

Missed Term Test -

- The weight of one missed term test will shift automatically to your final exam provided you have written the other term-test. No make-up will be held.
- It is in your best interest to write both term tests because I will also shift the weight of either or both of your term tests to the final exam if you do better on the final exam. Term tests are good practice for the final.
- If you miss both term tests, a grade of zero will apply to the second term test unless the student can provide approved medical documentation.

Missed Final Exam Policy -

- A student who misses the final exam must follow the Economics Department Deferred Final Exam Policy procedures.
- The Deferred Final Exam Policy is found at <https://uwaterloo.ca/economics/undergraduate/resources-and-policies/deferred-final-exam-policy>
- The deferred exam will be substantially different than that written by the rest of the class.

Instruction Goals and Support -

- My objective is to support your own individual learning goals, whether by answering questions during lectures, explaining concepts during office hours/appointments/e-mail, or pointing you to further resources that will strengthen your ability to achieve your goals.
- In order to achieve a healthy balance between my work and personal life, there will be a finite amount of time I can dedicate to answering emails or setting up appointments outside of regular office hours. I will do my best to respond quickly to emails and to accommodate students with time conflicts; however, due to class sizes, just be aware that I may not have the time resources to meet all requests or respond in a timely manner, and I encourage you to plan in advance to avoid times of heavy demands on my time (e.g. test dates).
- Some students at UW worry that they were admitted by mistake, that they aren't smart enough, or feel that they do not belong. I want you to know that however you got to UW, we are glad you are here. Whether you have failed past courses or current tests, you are smart enough. You belong here, and I look forward to being a part of your learning process. What is more, different levels of understanding and diverse perspectives enrich the learning experience for all of us.
- When determining your own learning goals, keep in mind that it may take more time or effort or support to achieve specific learning goals particularly if the goals are very high, or if you have not had the same level of preparation or experience as other students. Be kind to yourself, and know that most people will be adjusting their goals as the semester progresses. Also know that I am here to support your learning goals, whether they be to understand a subset of the econometric tools, to pass the course, or to achieve a high grade. Grades are never guaranteed of course! Part of my job is to assign a grade for each of you in this course, but I am not here to judge you, and I do not equate lower grades with lower intelligence or worth (we all have different interests and goals).

Territorial Acknowledgement:

We acknowledge that we are living and working on the traditional territory of the Neutral, Anishinaabe and Haudenosaunee peoples. The University of Waterloo is situated on the Haldimand Tract, the land promised to the Six Nations that includes six miles on each side of the Grand River. Learn more about the [Anishinaabe](#), [Haudenosaunee](#), [Six Nations](#), and [territorial acknowledgement](#). For more information about the purpose of territorial acknowledgements, please see the [CAUT Guide to Acknowledging Traditional Territory](#).

Accommodation for Students with Disabilities:

Note for students with disabilities - [AccessAbility Services](#), located in Needles Hall, room 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 [AccessAbility Services](#) office at the beginning of each academic term.

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. Check the [Office of Academic Integrity website](#) for more information.

Discipline - A student is expected to know what constitutes academic integrity, to avoid committing an academic offence, and to take responsibility for his/her actions. [Check the [Office of Academic Integrity](#) for more information.] 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 instructor, academic advisor, or the Undergraduate Associate Dean. For information on categories of offences 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 (s)he has a ground for an appeal should refer to [Policy 72 - Student Appeals](#).

Cross-listed courses:

Please note that a cross-listed course will count in all respective averages no matter under which rubric it has been taken. For example, a PHIL/PSCI cross-list will count in a Philosophy major average, even if the course was taken under the Political Science rubric.

Mental Health Support:

All of us need a support system. The faculty and staff in Arts encourage students to seek out mental health supports as needed. Full details can be found online at the Faculty of ARTS [website](#)

On Campus

- Counselling Services: counselling.services@uwaterloo.ca / 519-888-4567 ext 32655
- [MATES](#): one-to-one peer support program offered by the Waterloo Undergraduate Student Association (WUSA) and Counselling Services
- Health Services Emergency service: located across the creek from Student Life Centre
- A variety of groups on campus offer further resources and support, including, but not limited to: [GLOW](#) centre for sexual and gender diversity peer support, the [Women’s Centre](#), the [Waterloo Indigenous Student Centre](#), please see [WUSA main web page](#) for further services and clubs which may provide more specific and personalized support for you.

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: 519-749-4330 x6880
- [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 x 213

Download [UWaterloo and regional mental health resources \(PDF\)](#)

Download the [WatSafe](#) app to your phone to quickly access mental health support information

Academic freedom at the University of Waterloo -[Policy 33, Ethical Behaviour](#) states, as one of its general principles (Section 1), “The University supports academic freedom for all members of the University community. Academic freedom carries with it the duty to use that freedom in a manner consistent with the scholarly obligation to base teaching and research on an honest and ethical quest for knowledge. In the context of this policy, ‘academic freedom’ refers to academic activities, including teaching and scholarship, as is articulated in the principles set out in the Memorandum of Agreement between the FAUW and the University of Waterloo, 1998 (Article 6). The academic environment which fosters free debate may from time to time include the presentation or discussion of unpopular opinions or controversial material. Such material shall be dealt with as openly, respectfully and sensitively as possible.” This definition is repeated in Policies 70 and 71, and in the Memorandum of Agreement, Section 6.