

APPLIED ECONOMETRICS I
ECONOMICS EC3388A-001
Department of Economics
Western University

September 2023

Instructor: Bruno Salcedo
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Office hours: Tuesdays 10:00 to 12:00 or by appointment

Delivery mode: In person
Meeting time(s): Mondays 9:30 to 11:30 and Wednesdays 11:30 to 12:30
Classroom: Mondays in UC3220 and Wednesdays in SSC1059
Course website: <https://owl.uwo.ca/portal>
Undergraduate inquiries: 519-661-3507 or SSC Room 4075 or econugrd@uwo.ca

Registration:

You are responsible for ensuring you are registered in the correct courses. If you are not registered in this course, the Department will not release any of your marks until your registration is corrected. You may check your timetable by using the Login on the Student Services website at <https://student.uwo.ca>. If you notice a problem, please contact your home Faculty Academic Counsellor immediately.

Prerequisite/Antirequisite Note:

The prerequisite(s) for this course is Economics 2223A/B.

You are responsible for ensuring that you have successfully completed all course prerequisites and that you have not taken any anti-requisite courses. Lack of prerequisites may not be used as a basis for appeal. If you are found to be ineligible for a course, you may be removed from it at any time and you will receive no adjustment to your fees. This decision cannot be appealed.

If you find that you do not have the course prerequisites, it is in your best interest to drop the course well before the end of the add/drop period. Your prompt attention to this matter will not only help protect your academic record but will ensure that spaces become available for students who require the course in question for graduation.

Tentative Course Outline:

Week	Topics	Laboratory	Notes
9/11 — 9/13	Review of OLS	Introduction to R	
9/18 — 9/20	Causality	Simulated endogeneity	
9/25 — 9/27	Maximum Likelihood	Titanic survivors	
10/2 — 10/4	Generalized Method of Moments	Simulated GMM	
10/09 — 10/11	Diff-in-diff	Minimum wages	Thanksgiving
10/16 — 10/18	Fixed effects	Drinking and driving	
10/23 — 10/25	Instrumental variables	Demand for cigarettes	
10/30 — 11/1	—	—	Reading week
11/6 — 11/8	Weak instruments	—	Midterm exam
11/13 — 11/15	Regression discontinuity	Quarter of birth	
11/20 — 11/21	Event studies	Alcohol and mortality	
11/27 — 11/29	Project guide	Unions and wages	Term project due
12/4 — 12/4	—	—	Term project presentations

Course Objectives :

This course is designed to give Economics Honours Students a practical understanding of modern econometrics tools used to estimate causal relations between economic variables. The theoretical part of the course aims to teach you: (1) how to select which econometric methods can help with specific questions or data sets; and (2) how to interpret the estimates and confidence intervals resulting from econometric analysis. The practical part of the course aims to help you develop the necessary skills to (1) implement econometric techniques to real-life data; and (2) use tables, diagrams, and graphs to effectively represent your findings. Some of the econometric tools discussed include regression models, robust and clustered standard errors, fixed and random effects, regression discontinuity design, instrumental variables, maximum likelihood, simultaneous equations, and non-linear binary response models.

Course Learning Outcomes:

Students who successfully complete the course will learn how to:

- Evaluate the validity of causal claims from studies, articles, and technical reports
- Identify which econometric models can help to answer some common economic questions
- Interpret the estimates, standard errors, and tests from different econometric models
- Estimate causal relations using appropriate datasets
- Understand some of the most commonly use econometric techniques
- Apply such techniques to real-life data using R or another statistics package

Textbook(s) and Course Materials:

- Wooldridge, Jeffrey (2015) *Introductory Econometrics: A Modern Approach*, 7th edition, South-Western.
- The 5th and 6th editions of this textbook are virtually identical for our purposes, as are earlier ones. Several copies of this textbook are on reserve at Weldon.
- Additional reading materials will be assigned in class or in the homework assignments.

Assessments and Grading:

The grade for this course will be determined as follows:

- 30% from a written report of the term project due **November 29**
- 20% from an oral presentation of the term project during the last week of the term
- 10% from an open-book midterm quiz to be held in class on **November 8** (tentatively)
- 40% from weekly laboratory practices

The main component of the course grade is the term project to be completed individually or in a small team. You must find a real-life dataset and identify a related Economic question. You must try to answer the initial question based on the empirical findings resulting from the statistical analysis of the data. The analysis must involve at least one multiple regression and at least one hypothesis test. The selection of the model(s) and hypotheses must be well justified by Economic theory. More details about the project will be provided in a different document once the course begins. In order to receive a passing grade, you must satisfactorily complete the term project.

You are welcome to use generative AI to assist with the text of your project. If you choose to do so, you must attribute proper credit. At the end of your project, write a short text explaining exactly how you made use of it. In my experience, current generative AI software can help with the form of the text, but not so much with the content. The content of the text generated by generative AI often has mistakes, especially when dealing with technical topics such as regression analysis. You are responsible for making sure that the text that you include in your project is correct. Additionally, you must understand all the text written in your project. During your presentation, I may ask questions about anything written in the project and I will deduct points from your grade if you are unable to answer them correctly.

Please Note
Department & University Policies for Fall 2023

The University expects all students to take responsibility for their own Academic Programs. Students should also check their registration to ensure they are enrolled in the correct courses.

1. **Guidelines, policies, and your academic rights and responsibilities** are posted online in the current Western Academic Calendar at: <http://westerncalendar.uwo.ca>. Claiming that “you didn’t know what to do” is not an acceptable excuse for not following the stated policies and procedures.
2. Students must familiarize themselves with the “**Rules of Conduct for Examinations**” http://www.uwo.ca/univsec/pdf/academic_policies/exam/administration.pdf.
3. **Cheating as an academic offence:** Students are responsible for understanding what it means to “cheat.” The Department of Economics treats cheating incidents very seriously and will investigate any suspect behavior. Students found guilty will incur penalties that could include a failing grade or being barred from future registration in other Economics courses or programs. The University may impose further penalties such as suspension or expulsion.
4. **Plagiarism:** Students must write their essays and assignments in their own words. When taking an idea/passage from another author, it must be acknowledged with quotation marks where appropriate and referenced with footnotes or citations. Plagiarism is an academic offence (see Scholastic Discipline for Undergraduate Students in the Western Calendar at http://westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page_20).

Western University uses software to check for plagiarism and students may be required to electronically submit their work. Those found guilty will be penalized as noted in point 3.

5. It is a Department of Economics policy that **NO** assignments be dated, stamped or accepted by staff. Students must submit assignments to the instructor.
6. **Appeals:** University policies and procedures for appealing a mark can be found in the Student Academic Appeals section in the current Western Academic Calendar at: http://westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page_14. **Please note the relevant deadlines.**

Department of Economics procedures for appealing a mark can be found here: https://economics.uwo.ca/undergraduate/program_counselling/responsibilities_policies.html#appeals. The Department will not consider an appeal unless an attempt has been made to settle the matter with the instructor first. Students who remain dissatisfied with the outcome may proceed to submit an appeal to econugrd@uwo.ca. Please follow the instructions and use the appeal form shown in the above link.

7. **Systematic adjustments of a class grade distribution** (either up or down) can occur in Economics courses. The fact that grades have been adjusted is **not** grounds for an appeal.
8. Note the following **add and drop deadlines**:
- Deadline to ADD OR DROP a first term full or half course: **Fri, Sept 15, 2023**
 - Deadline to WITHDRAW from a first term full or half course: **Mon, Nov 13, 2023**

Policy Regarding Makeup Tests and Final Examinations

Faculty of Social Science policy states that oversleeping or misreading an exam schedule is NOT grounds for a makeup. This rule applies to midterm and final exams in the Department of Economics.

Policies Regarding Academic Accommodation

- Academic accommodation will not be granted automatically on request. Students must demonstrate by documentation that there are compelling medical or compassionate grounds before academic accommodation will be considered. The Faculty of Social Science's policies on academic accommodation are found at https://counselling.ssc.uwo.ca/procedures/academic_consideration.html
- **Accommodation for Students with Disabilities:** Students with disabilities or accessibility challenges should work with Accessible Education (formerly SSD, see http://academicsupport.uwo.ca/accessible_education/index.html), which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The accommodation policy can be found here: [Academic Accommodation for Students with Disabilities](#).
- **Rewriting Exams and Retroactive Reweighting are NOT Permitted:** Students who proceed to write a test or examination must be prepared to accept the mark. Rewriting tests or examinations, or retroactive reweighting of marks, is **not** permitted. Students must also book travel arrangements AFTER final exam dates have been posted as they must not conflict with test or final exams.
- Unless medically incapable of doing so, students must notify their instructor prior to the test date or at least within **24 hours** when requesting a makeup exam. Failure to follow this procedure may result in denial of academic accommodation and a grade of zero. Students should also set up an appointment as soon as possible to meet with their instructor. If the instructor is not available, send an email message to the instructor, copying the Undergraduate Coordinator at econugrd@uwo.ca. **Notifying instructors of a missed exam does not automatically entitle students to a makeup.**
- For medical illnesses, students may consult Student Health Services and request a Student Medical Certificate from the physician. If assessed by an off-campus doctor, students must obtain a certificate from his/her office at the time of the visit/assessment. Student Medical Certificate (SMC) is available here:

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf

- **Documentation for Accommodation:** Individual instructors are not permitted to receive documentation directly from a student, whether in support of an application for consideration on medical grounds or for other reasons.
- **Western University policy on Consideration for Student Absence** is available here: https://counselling.ssc.uwo.ca/procedures/probation_rtw/appeals.html
- **Religious Accommodation:** Students should consult the University's list of recognized religious holidays and should give reasonable notice in writing, prior to the holiday, to the Instructor and an Academic Counsellor if their course requirements will be affected by a religious observance. Additional information is given in the [Western Multicultural Calendar](#).

Policy Regarding Class Attendance and Engagement: If the instructor deems a student's attendance or engagement in the class to be unsatisfactory, that student may be prohibited from writing the final examination. Examples of unsatisfactory class engagement include frequent absences from an in-person or synchronous online class, lack of assignment submissions, and inadequate use of online course materials. Instructors who intend to make use of this policy will notify the student in advance.

Statement on Mental Health and Support Services: Students under emotional/mental distress should visit http://uwo.ca/health/mental_wellbeing/ for more information and a complete list of resources on how to obtain help.

Statement on Remote Proctoring: While Western intends to hold most classes, mid-terms and finals in-person, the London-Middlesex Health unit may require western to teach in a remote format. If this occurs, all assessments will be done remotely and may involve the use of remote proctoring software (i.e., Proctorio, ProctorTrack). Instructors will provide information on the details should the need arise.

