

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

**General Information:**

**September 2020**

**Instructor:** Charles J. Saunders  
**Office:** 4078 SSC  
**Phone:** 519-661-2111 ext. 85410  
**E-mail:** csaund9@uwo.ca  
**Office hours:** Virtual office hours using Zoom

- Wednesday 9am (London, Ontario time)
- Wednesday 9pm (London, Ontario time)
- Zoom Meeting ID and link to connect are posted on OWL

**Delivery mode:** Online:

- Lectures are asynchronous: slides and associated videos on OWL
- Labs are synchronous using Zoom, dates and times to be determined

**Course website:** <https://owl.uwo.ca/portal>  
**Undergraduate inquiries:** 519-661-3507 or SSC Room 4075 or [econugrd@uwo.ca](mailto:econugrd@uwo.ca)

*Please plan attend one of the two office hours on **Wednesday September 9, 2020**. This will allow me to go over the course plan and answer any questions you have.*

**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 Note:**

The prerequisite for this course is **Economics 2223A/B**.

*Prerequisites and antirequisites for your course can be found in the Western Calendar at:*  
[https://www.westerncalendar.uwo.ca/Courses.cfm?CourseAcadCalendarID=MAIN\\_003204\\_1&SelectedCalendar=Live&ArchiveID=](https://www.westerncalendar.uwo.ca/Courses.cfm?CourseAcadCalendarID=MAIN_003204_1&SelectedCalendar=Live&ArchiveID=)

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.

## **Online Requirements:**

### Zoom Meetings:

The course content is delivered primarily using OWL. Office hours (and any unscheduled tutorials and synchronous lectures) will be delivered via Zoom. Students will be able to “Join” with a Zoom meeting using the tool on OWL.

Conduct in a Zoom meeting will adhere to guidelines outlined by Western University. Summary of which follows:

- Students must be able to identify themselves in a Zoom meeting. Identification can include, but not limited to; activating student’s webcam for visual confirmation, private message in Zoom Chat to the professor (or TA), or verbal confirmation.
- Students must have a microphone and on mute when joining the Zoom meeting.
- Students will preferably have a webcam available.
- Damaged or malfunctioning technology or low bandwidth that could affect the student’s use of Zoom should be brought to the professor’s attention as soon as possible.

<p><b>Failure to identify yourself in a Zoom Meeting will result in your removal from the meeting, and you will be unable to reconnect.</b></p>
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### Email:

Primary contact with the professor will be via email ([csaund9@uwo.ca](mailto:csaund9@uwo.ca)) **AND** students must use their Western email account (@uwo.ca). Emails from students using another domain (e.g. @gmail or @outlook) will be ignored.

## **Course Objectives:**

The course is designed for Honours Students in Economics that have a solid understanding of Ordinary Least Squares (OLS). The course extends this understanding of the linear model to several modern econometric methods used in economic research and by business economists. The course introduces maximum likelihood and generalized method of moments estimation, which are used in many econometric methods.

Econometric methods covered are:

- Panel data methods: fixed effects and random effects
- Difference-in-Difference
- Discrete data models: Probit and Logit
- Time series data: ARIMA, VAR and forecasting

Students will use an econometrics/statistics software program to apply these methods to real-world data sources. The results will be compiled and interpreted to write short reports and a term paper.

## Textbook(s) and Course Materials:

- Jeffrey M. Wooldridge, *Introductory Econometrics: A Modern Approach*, 7<sup>th</sup> edition, South-Western College Pub.

Earlier versions may have a similar presentation of the material, but individual chapters may be rearranged.

Other resources:

- Ruey S. Tsay, *Analysis of Financial Time Series*, 3<sup>rd</sup> edition, John Wiley & Sons Inc.

## Attendance Requirements:

Office Hours: You will be required to attend some office hours to provide an update on your Term Paper progress and to discuss any difficulties you are having.

Labs: Some of the Labs will be optional depending on the statistical software you choose to use for your assignments and term paper.

## Technical Requirements

- Laptop or computer
- Stable internet connection
- Microphone
- Webcam

For technical support, see the OWL Help page or contact Western Technology Services Helpdesk (<https://wts.uwo.ca/about-wts/contact.html>). Google Chrome or Mozilla Firefox are the preferred browsers for OWL; update your browser frequently.

## Course Learning Outcomes:

Outcome	Assessment	Contribution to Grade
These empirical exercises reinforce what was learned in previous econometrics course, and the methods introduced in the lectures. Students will import data into a statistical software and analyze it in terms of summary statistics, and several different regression methods. Students will also examine the data for relationships and patterns. Students will interpret the estimation results and express these results in written reports that demonstrate understanding.	Three Assignments	20% each
Students are expected to share their progress in their term paper during office hours or scheduled labs (times TBD). This allows the students to verbally explain their term	Participation	10%

Outcome	Assessment	Contribution to Grade
paper project and express what difficulties they have come across.		
The term project combines the aspects of the assignments into a single report. The analysis is a replication of an empirical paper with new or different data. The main focus of the paper is on the regressions, statistical tests and interpretation of the results. This combines the learning objectives from all the econometrics courses.	Term paper	30%

### Assessments and Grading:

Assessment	Due Dates*	Contribution to Grade	Material
Assignment 1	October 1	20 %	Up to Lecture 1
Assignment 2	October 22	20 %	Up to Lecture 6
Assignment 3	November 19	20 %	Up to Lecture 8
Term Paper	November 26	30 %	Student selected material
Participation	Over the term	10 %	Weekly

\* Exact dates will be provided on OWL, either by Announcement or Calendar or both.

#### Assignments:

- MS Word template for the assignment will be provided, which will contain the relevant sections that are required.
- Instructions will be uploaded to OWL.

#### Missed assignments:

Assignments must be submitted on time. Late assignments will not be accepted, and no make-up assignments will be given.

Valid medical reasons for failing to submit an assignment must go through Social Science Academic Counselling, and under these conditions the grade weight will be moved to the remaining assignments.

#### Term Paper:

- All instructions and deliverables will be uploaded to OWL

### Topics Covered and Readings:

#### Topics covered:

- Lecture 1 – Review of statistics and OLS – Wooldridge: Chapters 1 – 9, 12, 15, and 16
- Lecture 2 – Maximum Likelihood – Notes
- Lecture 3 – Generalized Method of Moments – Notes
- Lecture 4 – Panel Data – Wooldridge: Chapters 13 and 14
- Lecture 5 – Difference-in-Difference and Regression Discontinuity – Notes
- Lecture 6 – Discrete Data Models – Notes
- Lecture 7 – Time Series – Wooldridge: Wooldridge: Chapters 10, 11, and 13

- Lecture 8 – Vector Autoregression – Tsay: Chapter 8

### **Professionalism, Privacy and Copyright:**

- Students are expected to follow the [Student Code of Conduct](#)
- All lectures and course materials, including slides, presentations, outlines, and similar materials, are protected by **copyright**. Students may take notes and make copies of course materials for their own educational purposes only.
- Students may not record lectures, reproduce (or allow others to reproduce), post or distribute lecture notes, assessments, or any other course materials publicly and/or for commercial purposes without written consent.
- Recordings (audio or video) are not permitted without explicit, written permission. Permitted recordings may not be distributed or shared.
- Students are expected to follow online etiquette expectations provided on OWL
- Students will be expected to take an academic integrity pledge before some assessments. Some sessions may be recorded by the instructor. Recorded sessions will remain within the course site or unlisted if streamed

**Please Note**  
**Department & University Policies for 2020-2021**

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

**Academic Rights and Responsibilities:** Students should be familiar with their “Academic Rights and Responsibilities” as outlined [here](#) in the Western Academic Calendar. Claiming that “you didn’t know what to do” is not an acceptable excuse for not following the stated procedures.

**Guidelines and Policies for Students** are posted online in the current Western Academic Calendar at <http://westerncalendar.uwo.ca>. Undergraduate information for the Faculty of Social Science can be found at: <https://www.ssc.uwo.ca/undergraduate/index.html> and for the Department of Economics at: <https://economics.uwo.ca/undergraduate/index.html>.

**Rules of Conduct for Examinations:** Students are expected to know the university’s Rules of Conduct for Examinations, available [here](#).

**Cheating and Academic Offences:** Students are responsible for understanding what it means to “cheat.” The Department of Economics treats cheating and other academic offences 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 Economics courses or programs. The University may impose further penalties such as suspension or expulsion.

**Plagiarism:** Plagiarism is an academic offence. Students must write their essays and assignments in their own words. Ideas/passages taken from another author must be referenced with footnotes or citations and acknowledged with quotation marks where appropriate. 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. See Scholastic Discipline for Undergraduate Students [here](#) in the Western Academic Calendar.

**Academic Appeals:** Students should refer to the Student Academic Appeals section [here](#) in the Western Academic Calendar. Please note the relevant deadlines.

**Department Appeals Procedures:** 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 submit a written appeal to the Undergraduate Director in Economics, stating the reasons for their appeal. Information on the Department of Economics’ appeals procedure and the appeals form are available [here](#).

**Systematic Adjustments:** Systematic adjustments of class grade distributions (either up or down) can occur in Economics courses. The systematic adjustment of a class grade distribution is **not** grounds for an appeal.

**Add/drop deadlines:**

Deadline to add a first term half course:

**Thursday September 17, 2020**

Deadline to drop a first term half course:

**Thursday November 12, 2020**

**Oversleeping or Misreading the Exam Schedule:** Faculty of Social Science policy states that oversleeping or misreading the exam schedule is NOT grounds for a makeup. This rule applies to all exams in the Department of Economics.

**End of Term Travel:** Students must book travel arrangements AFTER final exam dates have been posted; travel is not an acceptable excuse for absence from a final exam.

**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.

**Accommodation Policies:** Students with disabilities should work with Accessible Education (formerly SSD), 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](#).

**Academic Consideration for Student Absence:** Students will have up to two (2) opportunities during the regular academic year to use an on-line portal to self-report an absence during the term, provided the following conditions are met: the absence is no more than 48 hours in duration, and the assessment for which consideration is being sought is worth 30% or less of the student's final grade. Students are expected to contact their instructors within 24 hours of the end of the period of the self-reported absence, unless noted on the syllabus. Students are not able to use the self-reporting option in the following circumstances:

- for exams scheduled by the Office of the Registrar (e.g., December and April exams)
- absence of a duration greater than 48 hours
- assessments worth more than 30% of the student's final grade
- if a student has already used the self-reporting portal twice during the academic year

If the conditions for a Self-Reported Absence are *not* met, students will need to provide a Student Medical Certificate if the absence is medical or provide appropriate documentation if there are compassionate grounds for the absence in question. Students are encouraged to contact their Faculty academic counselling office for more information about the relevant documentation. It is strongly recommended that students notify the instructor as soon as possible, ideally before the assessment, when they become aware of an absence. University policy is that students must communicate with their instructors no later than 24 hours after the end of the period covered by the SMC or immediately upon their return from their documented absence. Failure to follow University policy and procedures may result in denial of academic accommodation and a grade of zero.

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. **All required documentation for absences that are not covered by the Self-Reported Absence Policy must be submitted to the Academic Counselling office of a student's Home Faculty.**

For Western University policy on Consideration for Student Absence, see:  
[Policy on Academic Consideration for Student Absences - Undergraduate Students in First Entry Programs.](#)

For the Student Medical Certificate (SMC), see:  
[http://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/medicalform.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf).

**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/](http://uwo.ca/health/mental_wellbeing/) for more information and a complete list of resources on how to obtain help.