

ECONOMETRICS II
ECONOMICS EC 2123B-003
Department of Economics
Western University

General Information:

Winter 2023

Instructor: Charles J. Saunders
Office: 4078 SSC
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E-mail: csaund9@uwo.ca
Office hours: Thursday 2:00 pm – 3:00 pm (Zoom)

Course website: <https://owl.uwo.ca/portal>
Class location: UCC 37
Class times: Tuesday 11:30 am – 1:30 pm
Thursday 11:30 am – 12:30 pm

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.

Requisite Note:

Antirequisites: *Main Campus* – Economics 2223A/B and Statistical Sciences 3859A/B.
Huron and King's – Economics 2223A/B.

Prerequisites: Economics 2122A/B or Statistical Sciences 2035 with a mark of 70; and 0.5 course from: Mathematics 1225A/B, Calculus 1000A/B, Calculus 1500A/B.

You are responsible for ensuring that you have successfully completed all course prerequisites, and that you have not taken any antirequisite 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.

Course Objectives:

This course is an introduction to linear regression methods that are used in economics and econometrics. Linear regression is used throughout economics and business to understand relationships between events and observations, and to make forecasts to provide guidance. By the end of the course, students should be familiar with simple linear regression, inference, and major assumptions of the linear model. Students will also know how to test for violations of the assumptions and how to correct the model. The empirical assignments will give the students the opportunity to apply their knowledge to actual economic examples.

Course Learning Outcomes:

- The students will reinforce their basic statistics, understand the intuition behind representing data with a line, and derive the simple linear regression estimators.
- Students will derive the simple linear model properties to show that it is unbiased, the variance of the estimator will be used to construct formal hypothesis tests of the parameters. The linear model assumptions are introduced which are key for the model properties and validate hypothesis tests.
- In economics, the theoretical model can be tested using an empirical design to determine relationships between variables. Multiple regression allows for more elaborate empirical model designs than the simple linear model, so correct specification is important. Students are introduced to model specification problems, implications and solutions.
- This empirical exercise reinforces the above outcomes by examining the econometric theory with data. Students will be able to estimate linear models in Excel, hypothesis tests of the estimates, and provide a brief interpretation of the estimates and implications on model design.
- Two of the linear model assumptions are relaxed leading to heteroskedasticity and endogeneity. Students will understand the implications of these violations on the estimates and hypothesis tests. They will also know how to test for a violation and be able to present solution(s) to fix the resulting implications.
- Students will learn about simple time series models and autoregressive models. Students will be able to derive the properties of the model and estimates. Forecasting is introduced, to learn how to assess the statistical difference between time series models.
- The last of the linear model assumptions is relaxed by way of autocorrelation. Students will derive the implications of, how to test for, and how to correct for this violation.
- This empirical exercise reinforces the above outcomes by examining the econometric theory with data. Students will be able to estimate linear models in Excel, hypothesis tests of the estimates, examine model specification and potential violations of the linear model assumptions. Students will be able to discuss the interpretation of the estimates, implications on model design, and potential solutions.

Textbook(s):

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

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

Assessments and Grading:

	Week starting	Lecture Slides	Assessment	Grade
1	Jan 9	Lecture 1 and Excel	Excel Assignment 1	4 %
2	Jan 16	Lecture 1	Excel Assignment 2	4 %
3	Jan 23	Lecture 2	Excel Assignment 3	4 %
4	Jan 30	Lecture 3	Quiz 1	10 %
5	Feb 6	Lecture 4	Quiz 2	10 %
6	Feb 13	Lecture 5	Assignment 1	19%
7	Feb 20	Reading Week		
8	Feb 27	Lecture 6	Quiz 3	10 %
9	Mar 6	Lecture 7		
10	Mar 13	Lecture 8	Quiz 4	10 %
11	Mar 20	Lecture 9		
12	Mar 27	Lecture 10	Quiz 5	10 %
13	Apr 3	Final Review	Assignment 2	19%
14	Apr 10	No lectures		

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

Quizzes:

- Quizzes will be administered using OWL
- Quizzes will be available from 8 am to 8 pm (EST) on the Friday of the week listed above
- Quizzes will be timed
- Content will be cumulative but with a greater emphasis on new material
- Questions will be randomized from a question bank

Excel Assignments:

- Assignments will be due on the Thursday of the week before 11:55 pm (EST)
- Excel workbooks must be completed and uploaded to OWL.
- Instructional videos available on the OWL site: “Excel for Economics”

Assignments:

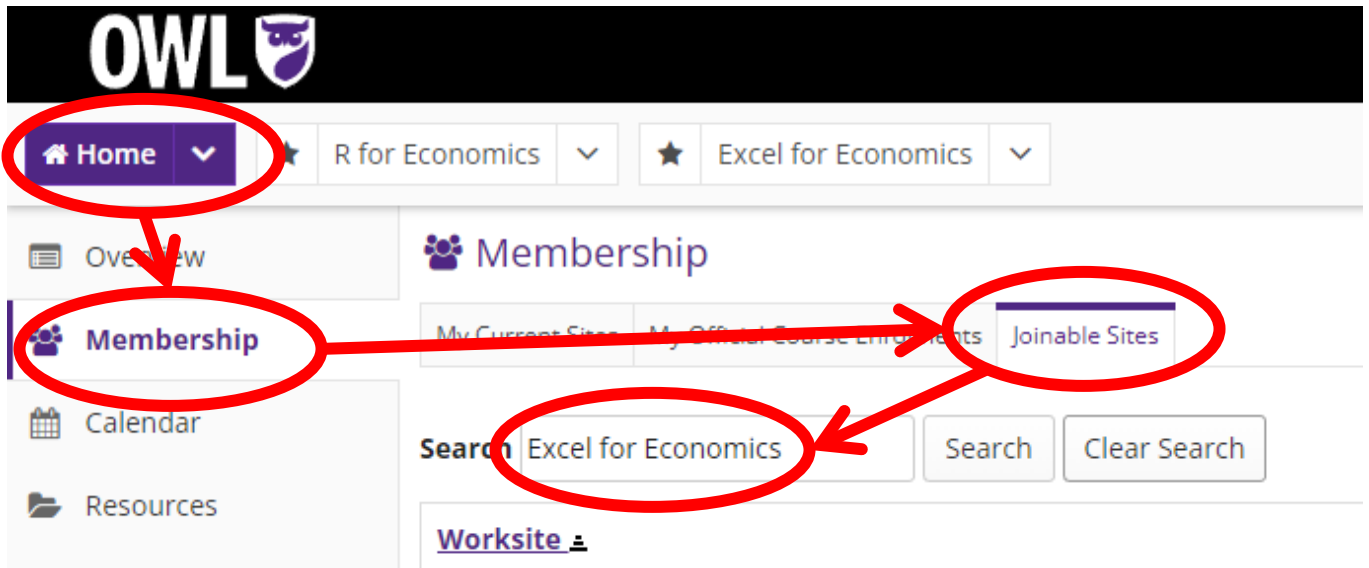
- Assignments will be due on the Thursday of the week before 11:55 pm (EST)
- MS Word template for the assignment will be provided
- Data will be provided

Missed assignments and quizzes:

- No make-up assignments and quizzes will be given.
- Assignments must be submitted on time.
- Late assignments will be docked 10 percentage points per calendar day until submitted.
- Students who miss submitting any assessment must follow Western University’s procedures for approval of their absence or not submitting to receive accommodation.

Excel for Economics:

- YouTube playlist: [Excel for Economics](#)
- *Excel for Economics* on OWL. Follow the steps below to join OWL site.



Online Requirements:

The course content is delivered primarily using OWL.

Email:

Primary contact with the professor will be via email (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.

Zoom:

Office hours will be delivered via Zoom. Students will be able to connect 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.

Failure to identify yourself in a Zoom Meeting will result in your removal from the meeting, and you will be unable to reconnect.

Professionalism, Privacy, and Copyright:

Lectures and course materials, including power point presentations, outlines, and similar materials, are protected by copyright. Students may take notes and make copies of course materials for their own educational purposes. Students may not record lectures, reproduce (or allow others to reproduce), post or distribute lecture notes, wiki material, and other course materials publicly and/or for commercial purposes without written consent.

Please Note
Department & University Policies for Winter 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 a second term half course: **Tuesday, January 17, 2023**
 - Deadline to drop a second term half course: **Tuesday, March 7, 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 unity 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.