

**ECONOMETRICS I
ECONOMICS EC2122A-001
Department of Economics
Western University**

September 2024

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Office hours: Online, Friday 11 am – 1 pm. Links will be posted on OWL. In-person office will be held two weeks before and one week after the midterm.

Delivery mode: In-person

Meeting time(s): Mondays 1:30 pm – 3:30 pm; Wednesdays 1:30 pm – 2:30 pm

Classroom: AHB-1B04

Course website: <https://westernu.brightspace.com/>

Undergraduate inquiries: 519-661-3507 or SSC Room 4078 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 **prerequisites** for this course are Economics 1021A/B and Economics 1022A/B; and one of MCV4U, Mathematics 0110A/B, Calculus 1000A/B, Calculus 1500A/B, Mathematics 1225A/B, or Mathematics 1230A/B.

The **antirequisites** for this course are Biology 2244A/B, Economics 2222A/B, Geography 2210A/B, Health Sciences 3801A/B, MOS 2242A/B, Psychology 2811A/B, the former Psychology 2810, the former Psychology 2820E, Psychology 2830A/B, Psychology 2850A/B, Psychology 2851A/B, Social Work 2207A/B, Sociology 2205A/B, Statistical Sciences 2035, Statistical Sciences 2141A/B, Statistical Sciences 2143A/B, Statistical Sciences 2244A/B, Statistical Sciences 2858A/B. Note: Students wishing to enroll in higher-level courses in the Department of Statistics and Actuarial Sciences are encouraged to consult that department.

Note: This course cannot be taken concurrently with or prior to taking Data Science 1000A/B as they will become antirequisites to one another in these sequences.

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.

Course Description:

An introduction to econometric description and inference which covers descriptive statistics for cross-section and time-series samples, probability; probability distributions and random variables; estimators and sampling distributions; confidence intervals and tests of hypotheses; simple linear regression

Course Objectives:

Economics 2122 is an introductory course in statistics with applications in economics and business. Statistics deals with collecting, analyzing, interpreting, and presenting empirical data. Thus, the main objective of this course is to train students in basic statistical techniques including descriptive and inferential statistics. Topics covered include data description, probability theory, sampling distribution, and hypothesis testing.

Course Learning Outcomes:

After successful completion of Economics 2122A, students will be able to:

1. Represent economic relationships using graphical and mathematical methods.
2. Calculate and interpret probabilities.
3. Calculate and interpret probability distributions for discrete and continuous random variables.
4. Calculate and interpret confidence intervals and understand the process of hypothesis testing.
5. Make inferences about populations based on quantitative analysis of sample data.

Textbook and Course Materials:

- Newbold, Carlson and Thorne, *Statistics for Business and Economics* (8th Edition) Prentice Hall (2013). ISBN 9780321931085. Bookstore [link](#).
- MyEconLab: <https://www.pearsonmylabandmastering.com/>
courseID: martinez75500

Quizzes will be administered via the MyLab platform. The access code may come in a bundle with the textbook, or it can be purchased separately. Instructions to enroll [here](#).

Assessments and Grading

Evaluation	Weight
Quizzes (6/8)	24%
Data Assignments (2)	6%
Midterm	30%
Final	40%

Quizzes

There will be eight quizzes. Only the top six of the eight will count towards the final grade. Quizzes will be administered through the Mylab online platform associated with the textbook. Quizzes will be 30-40 minutes long, consist of multiple-choice questions, and held during class time at the classroom.

In-class quizzes have flexible grading, meaning that the 2 lowest quiz scores are dropped from the calculation of your grade. For this reason, self-attestation is not accepted for quizzes, in accordance with University policy.

Data assignments

Two data assignments will be administered through OWL's course site. Assignments will involve data analysis, visualization, and statistical testing using R or Excel. Students will have one week to submit the assignments after being posted with a 48-hour grace period for late submissions. Assignments submitted after the late submission period will not be accepted and will receive a mark of zero.

Please note that because the submission deadline for the data assignments already includes flexibility in the form of a 48-hour submission window after the deadline. Due to the flexibility in this assessment, self-attestation is not accepted for late assignments, in accordance with University policy.

Midterms and Final Exam

The midterm and the final exam will be closed book. The midterm will be taken during class at the classroom. The midterm and the final exam will consist of multiple choice, true/false, calculation/graphing, fill-in-the-blank questions, and/or short answer question. The midterm will be 90 minutes long and the final exam 120 minutes long. During exams, students are forbidden to communicate with any person other than an examination proctor or the instructor.

Please note that the midterm exam is considered central to the learning objectives for this course. Accordingly, students seeking academic consideration for this assessment will be required to provide formal supporting documentation as outlined in the *Policy Regarding Academic Accommodation*. To be clear, students cannot self-attest for the midterm exam. Students who are granted academic consideration for this assessment will have the weight of the midterm shifted to the final exam; there are no make-up midterms. Also, note that the University policy precludes students to self-attest for the final exam.

Assessment Schedule

Assessment	Chapter	Date	Location and Time
Quiz 1	1&2	Sep 16	During class at the classroom (AHB-1B04)
Quiz 2	3	Sep 23	
Quiz 3	4-5	Oct 7	
Midterm	1-6	Oct 21	
Quiz 4	7	Nov 4	
Quiz 5	8	Nov 11	
Quiz 6	9	Nov 18	
Quiz 7	10	Nov 25	
Quiz 8	11	Dec 4	
Final	1-11	TBD*	TBD*

* The final exam will be scheduled by the Registrar's Office. The date and location will be announced once assigned.

Assignment Schedule

Assignment	Chapter	Posting	Deadline	Late
HW1	1-6	Oct 23	Oct 30	Nov 1
HW2	7-11	Nov 27	Dec 4	Dec 6

Tentative Course Schedule and Topics Covered

Week	Chapter	Subject
W1	1&2	Describing Data
W2	3	Probability
W3	4	Discrete Random Variables and Probability Distributions
W4	5	Continuous Random Variables and Probability Distributions
W5	6	Sampling Distributions
Reading Week		
W6	1-6	Midterm - Intro to R
W7	7	Estimation: Single Population
W8	8	Estimation: Additional Topics
W9	9	Hypothesis Testing: Single Population
W10	10	Hypothesis Testing: Additional Topics
W11	11	Simple Regression
W12		2nd R session- Review

All dates and times are tentative as they must be approved by Exam Central. Any changes to this schedule will be announced in class and posted in OWL, accordingly. Students are expected to know and can be tested on additional material presented in lectures but not included in the book.

Technical Requirements

- Laptop or computer
- Stable internet connection

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.

As mentioned before students will be introduced to the R programming language. No prior programming knowledge is necessary. Students have three options to access R.

- 1) Students obtain a Gmail account and use [Google Colab](#) (preferred option by instructor);
- 2) Book time in the [labs at SSC](#) to use R
- 3) Install R and RStudio locally on their own devices.

For option 3) note that R must be installed first (<https://cran.r-project.org/>). RStudio Desktop provides a more friendly programming environment and is used in conjunction with R (<https://posit.co/download/rstudio-desktop/>).

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 the written consent of the instructor.
- Recordings (audio or video) are not permitted without explicit, written permission of the instructor. Permitted recordings may not be distributed or shared.

Communication and Email Policies:

Use the office hours and the class to communicate with me. Leave emails to communicate with me regarding absences, academic accommodations, or other logistics not detailed in this syllabus.

When communicating through email:

- Use your UWO email address in all communications.
- In your email subject, please include ECON2122A(001) and your student number.
- I will try to respond to emails within 48 hours except for weekends and/or holidays

Tips on How to be Successful in this Class:

Students in this class should understand the level of autonomy and self-discipline required to be successful.

- Read the textbook before class. Read the chapter we will cover during the week.
- Participate in class and do not be afraid to ask questions. Feel free to interrupt me to clarify a concept. I will pause frequently to encourage students to ask questions.
- Connect with others. Try forming study groups and meet regularly for study and peer support.
- Come to office hours
- Do not skip class
- Check OWL/Brightspace regularly
- Take note of the assignments, and exam schedule. Plan to distribute your work ahead of busy weeks.
- Take notes as you go through the lesson material. Keeping handwritten notes will help you learn more effectively than just reading or watching.

PLEASE NOTE
DEPARTMENT & UNIVERSITY POLICIES FOR FALL 2024

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. A [*new academic consideration and flexibility in assessment*](#) policy is in effect starting September 2024. Students can miss one assessment per course per term without medical documentation. Faculty can designate one assessment per course for which students **cannot** self-attest.
3. Students must familiarize themselves with the “**Rules of Conduct for Examinations**” http://www.uwo.ca/univsec/pdf/academic_policies/exam/administration.pdf.
4. **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.
5. **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 4.

6. It is a Department of Economics policy that **NO** assignments be dated, stamped or accepted by staff. Students must submit assignments to the instructor.
7. **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.

8. **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.
9. **ADD AND DROP DEADLINES:**

- Deadline to **ADD** first term full or half course: **Fri, Sept 13, 2024**
- Deadline to **DROP/WITHDRAW** first term full or half course: **Mon, Dec 2, 2024**

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 **48 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.