

**ECONOMETRICS I
ECONOMICS EC2122A-002
Department of Economics
Western University**

September 2024

Instructor: F. Javier Martinez Hernandez
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Office hours: *In-person, Friday 11:00 am - 1:00 pm*
Delivery mode: *In-person.*
Meeting time(s): *Tuesdays 2:30 pm – 4:30 pm; Thursdays 2:30 pm – 3:30 pm.*
Classroom: *AHB-2B02*
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 **prerequisite(s)** 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 **antirequisite(s)** 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 in 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 upon quantitative analysis of sample data.

Textbook(s) and Course Materials:

Statistics for Business and Economics, 8th edition, by Newbold, Carlson, and Thorne

Bookstore link: https://bookstore.uwo.ca/textbook-search?campus=UWO&term=W2024A&courses%5B0%5D=002_UW/ECO2122A

MyEconLab (MyLab): (Mandatory)

- Website: www.pearsonmylabandmastering.com
- Course ID: martinez86321
- To register for MyLab for this course, see the student registration handout for MyLab Economics on the course website www.owl.ca under Resources folder.
- Students must register for MyLab Economics using their UWO email and UWO student number. Students using emails other than their UWO email and/or without their UWO

student number will be removed. If an account is removed, all activities associated with that account will also be removed.

Classroom Policies:

Please note that standard rules of etiquette apply in the classroom. They include but not limited to:

- Give full attention to anyone speaking, whether the person is the instructor or a fellow student.
- Turn off (or put on vibrate) your cellphone. Do not answer your cellphone in class. Also do not text during class.
Be on time for class. If you are late or must leave early, enter and exit as quietly as possible.
- Videography/photography is NOT permitted as it may violate the privacy of your classmates.

You are expected to attend class on a regular basis. If you miss a class, it is your responsibility to find out what you have missed from a classmate. There are no further lecture notes other than what is available on OWL.

Email Policies:

- Please use your UWO email address in all communications.
- In your email subject, please include your name/student number/course number and section number as it will help me process your request or answer your questions faster.
- I will try to respond to all emails within 48 hours except for weekends and/or holidays.
- Please note that I might NOT respond to email such as following:
 1. Any question that is on this syllabus or elsewhere on OWL such as exam time and date, course materials, makeup policy etc. If you are not clear about any provided information, feel free to ask me at the end of the lectures.
 2. Requests for EXTRA assignments, reweighting of exams, assignments etc. as they are prohibited under Senate regulations.
 3. Requests for any extra lecture notes other than the ones provided on the OWL course page.

Assessments and Grading:

Grading will be based in the following components:

Type	Tentative Time and Date	Chapters	Weights
Midterm 1	October 8, 2024, in class	Ch. 2-5	20%
Midterm 2	November 19, 2024 in class	Ch. 6-8	25%
Final Exam	TBD by Registrar.	Ch. 2-11	45%
Assignments	Ten assignments during term (see below).		10%

Assignments will be published and requested either through MyLab or through the OWL's course site. It is in the best interest of the students to make all of them as they will provide practice for the midterm exams and final exams. To provide flexibility for students, only the best 9 out of 10 will count towards grading purposes. It is in your best interest to avoid using any Artificial Intelligence chatbot to solve the problems, as these tools will not be allowed during the assessments and will not provide you with the intuition and mathematical maturity you will need for this class or any upcoming course. Assignments may request students to use Excel (or R if already discussed) and upload them to the appropriate OWL assignment tab. The assignments provide valuable basis for understanding the concepts and their application for problems like those in the midterms and final.

Midterms will be closed-book and held in person during class. The final exam will also be a closed-book, in-person exam. Assessments are in a mixed format (a combination of multiple-choice, true/false, calculation/graphing, and/or fill-in-the-blank questions, etc.).

Please note that all times and dates mentioned above are tentative and subject to the approval of the Office of Registrar.

Policies regarding missed assessments:

- Midterm exams: students can only self-attest for Midterm 1. If a student needs to ask for accommodations for Midterm 2, the student needs to provide documentation and request an academic accommodation through proper channels. **There will be no makeup exams for midterm 1 and midterm 2. Any student that either self-attests for midterm 1 or has a valid accommodation for midterm 2 will have to shift their weight to the final exam.** The instructor reserves the right to provide students in each case a longer version of the final exam to measure the student's knowledge of the topics in the midterm that was not taken.
- Assignments: self-attestation may not be used for assignments, as the grading scheme has already built-in flexibility for this mode of assessment.
- Final exam: if the instructor and Academic Counselling accept your documentation, you are eligible to take a makeup exam which will be set by the Department of Economics. The makeup Final exam will be held AFTER the original Final exam date.

For midterm 1, if you choose to self-attest, you must notify your instructor within 48 hours of the exam that you have missed.

For midterm 2 and final exams, you must take your documentation to Academic Counselling within 48 hours of the exam. You must also notify your instructor within 48 hours of the exam that you have missed. You must meet both deadlines, and failure of not doing so will result in a grade of zero.

Missing both midterms and/or the final exam is likely to result in an inability to meet the course learning outcomes and/or to pass the course.

Tentative Course Schedule and Topics Covered:

Chapter 2 (Week 1): Describing Data: Numerical

Chapter 3 (Week 2): Probability

Chapter 4 (Week 3): Discrete Random Variables and Probability Distributions

Chapter 5 (Week 4): Continuous Random Variables and Probability Distributions

Week 5 Midterm I and Intro to R

Chapter 6 (Week 6): Sampling and Sampling Distributions

Chapter 7 (Week 7): Estimation: Single

Chapter 8 (Week 8): Estimation: Additional Topics

Week 9 Midterm II

Chapter 9 (Week 9): Hypothesis Testing: Single Population

Chapter 10 (Week 10): Hypothesis Testing: Additional Topics

Chapter 11 (Week 11): Simple Regression

Week 12 Review and 2nd R session

Notes: weeks are counted Thursday to Wednesday. This tentative course schedule is subject to changes. Any changes to this schedule will be provided in class and posted in OWL accordingly. Importantly, some chapters will not be covered entirely; please see OWL for details on the material covered for each chapter. Students will be held responsible for all material presented in lectures, regardless of whether the material appears in the textbook.

Reading week will be between October 12 and 20, 2024.

In the last week of classes there will be a review session in which we will discuss the doubts for the class before the final exam.

We will use Excel and R through the course to analyze real data or to simulate data for our in-class examples or for assignments. The instructor suggests that students have a Gmail account as we could use Google Collab for R. If this is not possible, then the instructor will book lectures in the appropriate computer laboratories and the schedule posted in OWL depending on class progress. Another potential option is that students bring a laptop computer to class to install R guided by the instructor. R is an open-source, free statistical package that will be useful for future classes for students and that allows the students to calculate all what the course will contain in a fast fashion once we understand the concepts in class.

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 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.
- Students are expected to follow online etiquette expectations provided on OWL (if applicable; otherwise delete this bullet point)
- Students will be expected to take an academic integrity pledge before some assessments (if applicable; otherwise delete this bullet point)
- Some sessions may be recorded by the instructor. Recorded sessions will remain within the course site or be unlisted if streamed (if applicable; otherwise delete this bullet point)

Communication and Email Policies:

- Please use your UWO email address in all communications as I am not allowed to respond to non-UWO email.
- In your email subject, please include ECON2122A(002) in your subject as it will help me process your request or answer your questions faster.
- I will try to respond to all emails within 48 hours except for weekends and/or holidays.
- Please note that I might NOT respond to email such as following:
 - Any question that is on this syllabus or elsewhere on OWL such as exam time and date, course materials, makeup policy etc. If you are not clear about any provided information, feel free to ask me at the end of the lectures.
 - Requests for EXTRA assignments, reweighting of exams, assignments etc. as they are prohibited under Senate regulations. Requests for any extra lecture notes other than the ones provided on the OWL course page.

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.

- Make it a daily habit to log onto OWL to ensure you have seen everything posted to help you succeed in this class.
- Follow weekly checklists created on OWL or create your own to help you stay on track.
- Take notes as you go through the lesson material. Keeping handwritten notes or notes in a regular Word document will help you learn more effectively than just reading.
- Connect with others. Try forming a study group and meet on a weekly basis for study and peer support.

- Do not be afraid to ask questions. If you have questions or are struggling with a topic, check the online discussion boards or contact your instructor(s).

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.