

Econometrics I  
ECONOMICS EC2222A-001/002  
Department of Economics  
Western University

September 2022

**Instructor:** Daniel Chaves  
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**Office hours:** In person @ 4045 SSC

- Monday: 1pm – 2:30pm;
- Wednesday: 11am – 12pm;

**Delivery mode:** *In-person*  
**Meeting times & Classroom:**  
Section 001 – Tu: 9:30 - 10:30am; Th: 9:30 - 11:30am @ WSC 55  
Section 002 – Tu: 2:30 - 3:30pm; Th: 1:30 – 3:30pm @ SSC 3022  
**Course website:** <https://owl.uwo.ca/portal>  
**Undergraduate inquiries:** 519-661-3507 or SSC Room 4075 or [econugrd@uwo.ca](mailto: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: (i) Economics 1021A/B and 1022A/B; **or** (ii) 0.5 from Mathematics 1225A/B, Mathematics 1230A/B, Calculus 1000A/B, and 0.5 from Mathematics 1229A/B, Mathematics 1600A/B, Calculus 1301A/B; or (iii) Calculus 1501A/B.

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 Objectives:

This is an introductory course in probability and statistics. The main goal is to teach students how to use statistics and basic economic theory to read and interpret data. This knowledge is paramount to learn how to use math and economics to understand the real world.

## Course Learning Outcomes:

At the end of this course students should be able to: (i) interpret tables, graphs, and statistics used for describing data; (ii) apply probability theory to model random variables; (iii) estimate population parameters using point and interval estimators; (iv) evaluate and describe the properties of an estimator; and (v) test theories about population parameters (determine an appropriate test statistic; implement a formal hypothesis test and interpret the outcomes)

## Textbook and Course Materials:

Newbold, Carson and Thorne “Statistics for Business and Economics” 8<sup>th</sup> edition (hereafter SBE).

## Communication:

- *Students should check the course OWL site every 24-48 hours*
- *Emails will be monitored daily; students will receive a response in 24 – 48 hours. When sending an email please use your @uwo account.*
- *Students can post course-related content on the OWL discussion forum so that everyone can access answers to questions. The discussion forums will be monitored daily by instructors or teaching assistants*

## Assessments and Grading:

Your grade in this course will be determined by a combination of online quizzes, two mid-terms and a final exam. The following table provides the weights attributed to each assessment. It also provides the tentative schedule for the quizzes and exams.

<b>Assessment</b>	<b>Tentative Date</b>	<b>Weight</b>
In class Quizzes	Sep 29; Oct 27; Nov 24; Dec 6	25%
Midterm 1	Oct 13	25%
Midterm 2	Nov 10	25%
Final	TBD	25%

Here is how each assessment will work:

Quizzes: The quizzes are spread throughout the semester and their goal is to make sure that you are keeping up with the material. The quizzes will be of approximately 30 minutes in length and will be held at the end of Thursday’s lectures. During the quiz students are forbidden from using any books, notes, study guides, diagrams, communication equipment such as a cell phone, or other aids unless authorized by the instructor; such authorization must be stated explicitly during

the examination. **Only the \*three\* best grades out of the four quizzes will be considered to compute students course grade.**

Midterms and Final: These are closed book exams and students are forbidden to communicate with any person other than an examination proctor or the instructor. The midterms will be taken in class and are cumulative until the date of its application. The final exam is also cumulative and can contain questions from any topic covered during the semester. More information regarding the structure of each exam will be provided closer to the exam date.

### **Policy Regarding Missed Quizzes and Exams:**

**There will not be make-up quizzes.** To account for possible unexpected events, **\*only the best three grades out of the four grades will be considered\***. It is worth noting that independent of approved, documented official accommodation, there will not be the reweighting of quizzes. For example, if you miss one quiz that quiz will be dropped. If you miss two quizzes, then one will be dropped and one will have a mark of zero.

Missed exams without approved, documented official accommodation will be given a mark of zero. If there has been an approved, documented official accommodation, a make-up test will be offered. The format, length and date of the make-up tests are at the discretion of the instructor. If a make-up assessment is missed, the student will receive a mark of \*zero\* in that assessment.

### **Topics Covered and Readings:**

- 1) Introduction: descriptive statistics and probability theory (Chapters 1 – 3, SBE)
- 2) Probability distributions: discrete random variables and probability distributions; continuous random variables and probability distributions, random sampling and sampling distributions (Chapters 4 – 6, SBE)
- 3) Estimation: point estimations and confidence intervals (Chapters 7 – 8, SBE)
- 4) Hypothesis testing: general principles of testing hypotheses; test of hypotheses about population parameters (means, proportions, differences in means and proportions and variances); relation between hypothesis testing and confidence intervals (Chapters 9 – 10, SBE)
- 5) Simple regression (if time allows): estimation of linear models; least square methods and properties of the estimators; assumptions of the simple regression model and inference (Chapter 11, SBE)

### **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*)

### **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.
- 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, contact your instructor.

**Please Note**  
**Department & University Policies for Fall 2022**

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](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](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](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](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](mailto: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 first term half course: **Friday, September 16, 2022**
  - Deadline to drop a first term half course: **Saturday, November 12, 2022**

### **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](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](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](mailto: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](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](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/](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.