

INTERMEDIATE ECONOMETRICS I  
ECONOMICS 2222A-001/002  
Department of Economics  
Western University

September 2018

**Instructor:** Md. Nazmul Ahsan

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**Office Hours:** Tuesday, from 11:00-1:00 pm or by appointment.

**Classroom meeting time(s) & location:**

Section 001 Tu: 9:30-10:30 am; Th: 9:30-11:30 am in UCC 41

Section 002 Tu: 2:30-3:30 pm; Th: 1:30-3:30 pm in UCC 41

**Course website:** <https://owl.uwo.ca/portal>

**Undergraduate inquiries:** 519-661-3507 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 Note:**

**The prerequisites for this course are Economics 1021A/B and 1022A/B, or Economics 2001A/B; and Calculus 1000A/B (with a mark no less than 60%) Calculus 1500A/B (with a mark no less than 60%) or the former Calculus 1100A/B (with a mark no less than 60%).**

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. Probability provides the foundation for statistics, which is what economists use to learn about the real world. We will start with basic ways of summarizing data, move on to theoretical tools to help us model and understand the data, and finally learn how to make inferences about the real world based on data and our new-found theoretical underpinnings.

In this course we will cover elementary concepts in probability and statistics, while introducing you to some of the formal language of economic modelling. Thus, the course is a first step in learning to use math to understand the world around us.

## Learning Outcomes:

Upon completion of this course you should be able to: understand and use the basic rules of probability, perform simple calculations with the distributions of discrete and random variables, calculate point estimates of population parameters, as well as the confidence interval for the population parameter and the sampling distribution of the estimate, and formulate tests for simple statistical hypotheses.

## Textbook:

The references to Newbold, Carson and Thorne “Statistics for Business and Economics” (SBE) are based on the 8th edition. The Seventh edition, is a cost effective and close substitute for the Eighth edition textbook.

Supplementary materials will be posted; they will serve as a guide or addition to the parts of the topics that are covered in the class.

## Grading:

Your grade in this course will be determined by four assignments, two mid-term exams, and a final.

Assessment	Date	Weighting
Assignments	Oct 04, Oct 30, Nov 13, Nov 29	20%
Mid-term	Oct 18, Nov 15	40%
Final	TBD	40%

## Notes on make-up exam:

*If you miss the midterm exam for valid reasons (doctor’s note or similar) there will be no make-up exam and your midterm exam weight will shift to the final exam weight. In case of absence at the final exam for medical reasons, please see the **Policy Regarding Makeup Tests and Final Examinations**.*

## Assignment Submission:

Please submit the assignments on the due date at the end of class, or to me (the box outside my office) by 5 pm. Late assignments are forfeited. You can submit the assignments in group, maximum group size is four.

## Topics:

This is a tentative list of topics to be covered; we may not get through all of this, or we may do slightly more.

1. Introduction: Descriptive statistics, Probability theory.  
—SBE, ch. 1-3. Sept 06 - Sept 27
2. Probability distributions: Discrete random variables and probability distributions, Continuous random variables and probability distributions, Random sampling and sampling distributions.  
—SBE, ch. 4-6. Oct 02 - Oct 18
3. Estimation: Point estimation, Confidence intervals.  
—SBE, ch. 7-8. Oct 22 - Nov 01
4. Hypotheses testing: General principles of testing hypotheses, Tests of hypotheses about population parameters: means, proportions, differences in means and proportions, variances. Relation between hypotheses testing and confidence intervals.  
—SBE, chs. 9-10. Nov 06 - Nov 20
5. Simple regression. Estimation in a linear model that represents changes in a variable of interest via changes in one explanatory variable. Least squares methods and properties of the estimators. Assumptions of the simple regression model and inference.  
—SBE, ch. 11. Nov 22 - Dec 06

**Please Note**  
**Department Policies for 2018-2019**

Remember that 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 and policies for the Faculty of Social Science and the Department of Economics are posted online in the current Western Academic Calendar at:  
<http://westerncalendar.uwo.ca>.
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 a notation on an official academic transcript, 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 in class or to the instructor during office hours.
6. When appealing a mark, students should refer to 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.

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 with a written appeal (e-mails are not acceptable) to the Undergraduate Director in Economics, stating the reasons for their appeal. A checklist is provided at:  
[http://economics.uwo.ca/undergraduate/program\\_counselling/responsibilities\\_policies.html#appeals](http://economics.uwo.ca/undergraduate/program_counselling/responsibilities_policies.html#appeals).

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 14, 2018**

Deadline to drop a first term half course:

**Monday November 12, 2018**

9. 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.

### **Policy Regarding Makeup Tests and Final Examinations**

*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.*

Students who proceed to write a test or examination must be prepared to accept the mark. Rewriting tests or examinations, or having their value reweighted on a retroactive basis, 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, 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.**

Students who seek a makeup exam must also provide supporting medical or other relevant documentation that their absence from a scheduled test or exam is beyond their control. Documentation should be submitted to the Academic Counselling Office of the student's *home* Faculty **as soon as possible (preferably within 24 hours of the scheduled test)**. Failure to follow this procedure may result in denial of academic accommodation and a grade of zero. If the documentation submitted is not acceptable, students will receive a zero for the missed test.

For personal illness, 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. The off-campus medical certificate form must also be used and can be found at:

[http://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/medicalform.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf).

Notes stating "For Medical Reasons" are not considered sufficient.

For religious or compassionate circumstances, students should ask their Academic Counsellor what documentation to provide. If documentation is judged sufficient, the Academic Counsellor will issue a Recommendation for a Special Examination (a single form for midterms or a triple-

color form for final exams). Once students have this form, they must contact their instructor as soon as possible to make arrangements. Even if approved by their Academic Counsellor, there is no guarantee that students will be allowed to write the makeup test/exam.

For final examinations, students need to seek permission from their *home* Faculty Counsellor, Instructor, and the Department Undergraduate Director. Failure to follow this procedure may result in a grade of zero. Students must ensure that the Special Examination form has been signed by the Instructor and Department Undergraduate Director and that the form is returned to the Academic Counselling Office for approval without delay. If approved, makeup examinations will be written within one month of the end of the exam period.

### **Policies Regarding Academic Accommodation**

The Faculty of Social Science's policies regarding academic accommodation is found at [http://counselling.ssc.uwo.ca/procedures/having\\_problems/index.html](http://counselling.ssc.uwo.ca/procedures/having_problems/index.html).

"Academic Rights and Responsibilities" are also outlined in the Western Calendar at <http://westerncalendar.uwo.ca/PolicyPages.cfm?PolicyCategoryID=1&command=showCategory&SelectedCalendar=Live&ArchiveID=>. Claiming that "you didn't know what to do" is not an acceptable excuse for not following the stated procedures.

### **Policy Regarding Class Attendance**

If the instructor deems a student's class attendance as unsatisfactory, that student may be prohibited from writing the final examination. If there is intent to make use of this University policy, the student will be notified in writing.

### **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.