SOCIOLOGY 2205A 002
Statistics for Sociology
Fall 2026
Tuesdays 4:30-7:30 pm in UCC 146
Delivery Method: in-person
Instructor: Professor Zajacova

Student Hours: TBD
Email: anna.zajacova@uwo.ca

COURSE DESCRIPTION

An introduction to the techniques of statistical analysis used by sociologists, including descriptive statistics, the normal curve, hypothesis testing and various measures of association.

Prerequisite(s): None.
Anti-requisite(s): Biology 2244A/B, Economics 2122A/B, Economics 2222A/B, Geography 2210A/B, Health Sciences 3801A/B, MOS 2242A/B, the former Psychology 2810, the former Psychology 2820E, Psychology 2811A/B, Psychology 2830A/B, Psychology 2850A/B, Psychology 2851A/B, Social Work 2207A/B, Statistical Sciences 2035, Statistical Sciences 2141A/B, Statistical Sciences 2143A/B, Statistical Sciences 2244A/B, Statistical Sciences 2858A/B.

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COURSE OBJECTIVES AND LEARNING OUTCOMES

Sociology 2205 is an introductory course designed to help you conduct and interpret basic quantitative analyses of social issues. The class will cover elementary statistical concepts and methods used in sociology and other social sciences. The emphasis is understanding the science and art of analysis and interpretation of findings. The material in this course can be roughly divided into two parts

1) The first part will cover **descriptive statistics**. Here we will learn how to summarize and describe data, first one variable at a time and then pairs of variables. We will learn basic numerical and graphical methods appropriate for categorical and continuous variables.
2) The second part will be **inference**, where we will learn how to generalize results obtained from a sample to the population. This part will start with the basic logic of inference, focusing on the importance of sampling distributions. Then we will apply the general approach to univariate and bivariate hypothesis tests and confidence interval calculations appropriate for categorical and continuous variables.

After a successful completion of the course, you will be able to

- Understand and appreciate statistics' role in social science
- Comprehend basic statistics used in industry, government, and academic reports
- Independently conduct elementary quantitative analysis of data
- Explain the logic of statistical inference
- Write and run your own Stata code to analyze real data, and interpret the resulting output
- Critically assess the presentation of statistical data in everyday life

REQUIRED COURSE MATERIALS

1. **Textbook "Introductory Statistics 2e"** (second edition) by Illowsky and Dean (2023), OpenStax, Rice University. This is a great textbook, available **FREE** online at https://openstax.org/details/books/introductory-statistics-2e. You can view the chapters online or download pdfs. If you wish, you can also buy a printed version for a reasonable price. We will only cover select chapters and chapter sections; I will indicate which sections to read each week.
2. **Statistical software Stata**. Get the **6-month license for Stata Version BE** for **$48 USD** from https://www.stata.com/order/new/edu/profplus/student-pricing/ .
   Stata must be installed before the second class. Note Stata-compatible operating systems: you will need a laptop; you cannot install Stata on your phone or most tablets. We will be using Stata all through the semester and access is necessary for class work, homework, and assignments. The installation requires some patience – please just follow instructions.
   Stata is also available in campus computer labs and through a remote login system. However, be aware that both options are inconvenient: labs limit access, and the remote option is technically challenging (your teaching team cannot provide tech support for it). Thus, I strongly recommend using your own laptop. If you don't have one, please borrow one for the term. Almost any laptop (even an old one) will work — you don't need a souped-up machine.
3. **Calculator**. Any will do, even the cheapest dollar-store calculator will be fine.

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COMMUNICATION

- Students are responsible for reviewing the course OWL Brightspace site on a regular basis for news and updates. This is the primary method by which information will be disseminated to all students enrolled in the course
- Pose questions in class
- **Student hours. You are always welcome to come in during student hours!** No need to sign up beforehand, just show up, we will be happy to see you.
- If you have a question specific to your personal situation, you can email your instructor at anna.zajacova@uwo.ca. Please allow 48 hours for response during the work week; no responses should be expected during breaks and weekends. General questions about course material or logistics should be explored in class or during student (office) hours.

COURSE SCHEDULE AND READINGS

The reading list and weekly schedule are available on the course OWL Brightspace site.

Sept 15	**Week 1. Introduction: what's statistics, descriptives & inference, variable types** Chapter 1: intro, 1.1-1.3
Sept 22	**Week 2. Descriptives for categorical variables** Chapter 1: 1.2, 1.3 Chapter 2: intro. Bar graph text in 2.1
Sept 29	**Week 3. Descriptives for continuous (quantitative) variables** Chapter 2: intro, 2.1-2.7
Oct 6	**Week 4. Probability, distributions** Chapter 3: intro, 3.1. Chapter 4: intro, 4.1, 4.2. Chapter 5: intro, 5.1, 5.2.
October 10-18 Reading week	
Oct 20	**Week 5. The normal distribution** Chapter 6: intro, 6.1, 6.2 Assignment 1 due October 20 at 11:59 pm
Oct 27	**Week 6. Sampling distributions** Chapter 7: intro, 7.1, 7.3
Nov 3	**Week 7. Hypothesis tests about a population mean; confidence intervals** Chapter 8: intro, 8.1, 8.2 Chapter 9: intro, 9.1, 9.3-9.5
Nov 10	Week 8. No lecture, no new material Midterm exam November 10 in class (120 minutes).
Nov 17	**Week 9. Hypothesis tests about two population means** Chapter 10: intro, 10.1
Nov 24	**Week 10. Chi square test for pairs of categorical variables** Chapter 3: 3.4 Chapter 11: intro, 11.1, 11.3-11.4
Dec 1	**Week 11. Correlation and regression for pairs of continuous variables** Chapter 12: intro, 12.1-12.4 Assignment 2 due December 1 at 11:59 pm
Dec 8	**Week 12. Correlation and regression, continued.** No new readings

Final exam: TBD; schedule to be posted on October 23.

Please note: Schedule and readings are subject to change.

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METHOD OF EVALUATION

The evaluation methods described in the course outline are essential requirements for the course.

Evaluation Breakdown

1.	Weekly in-class quizzes	10%
2.	Weekly homeworks	10%
3.	Midterm exam, in class, November 10	29%
4.	Final exam, time and place TBD	39%
5.	Two group assignments, worth 6% each	12%

1. **Weekly in-class quizzes.** During most or all classes, we will have a short 5-question quiz via Brightspace-Assessments-Quizzes.
2. **Weekly homeworks.** Every week, you will upload assigned homework problems to Brightspace Assignment tab. The homeworks will be graded as pass/fail; the aim is to encourage regular work on the class material. With that aim in mind, homework will be due the week after the class for which they are assigned. There will be an additional week-long grace period but homeworks cannot be uploaded once the assignment tab is closed.

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For quizzes and homeworks, the lowest 2 scores from each category will be dropped from final grade calculation. These can be low scores or zeroes on missed quizzes/homeworks. This is a universal accommodation that covers all medical, personal, technical, internet-connection, or any other circumstance, situation, or problem. No further accommodation is possible.

3. **Midterm.** Paper-and-pencil, closed-book exam, mostly or exclusively multiple choice, during the regular class period. Calculators are allowed. Formula sheet and statistical tables will be provided as needed; additional information will be provided at least 14 days prior to the exam. The midterm has been designated as requiring supporting documentation (self-attestation is not allowed to skip or reschedule it; official university consideration is necessary).
4. **Final exam.** Paper-and-pencil, closed-book exam, mostly or exclusively multiple choice. Formula sheet and statistical tables will be provided as needed; additional information will be provided at least 14 days prior to the exam.
5. **Assignments**. Two assignments focus on practicing independent data analysis with Stata. Detailed instructions will be posted on Brightspace at least 10 days before deadline. You will complete the assignments in groups of two or three, choosing your own partner(s) and submitting one pdf per group. If you prefer, you can submit on your own; no need to ask/email.

Makeup exams. There will be **one makeup date** for the midterm and one for the final. The dates are set by the Sociology Department. They are available **only** to students with official consideration through the Academic Counselling Office. **Your instructor cannot make any exceptions.** Please see the new policy about missed makeup exams under Academic Policies below.

ELECTRONIC DEVICES DURING ALL EXAMS

No electronic or wearable devices are permitted on your person or within reach during any test or examination unless explicitly authorized by the instructor.
This includes, but is not limited to, phones, smartwatches, all other watches, tablets, laptops, earbuds or headphones, smart glasses, cameras, fitness trackers, and any other electronic, recording, photographic, communication, or wearable device. Devices are prohibited whether they are powered on or off.
Before the examination begins:

- Remove all watches or fitness trackers, smart or not.
- Phones and all other electronic devices must be completely put away in a bag or other designated location—not in a pocket, on the desk, or otherwise on your person or within reach.
- Earbuds and headphones must be removed and stored.
- Smart glasses or other electronic eyewear may not be worn.
- Hoods and hats must not be worn, except where an accommodation or religious or medical requirement applies.

Electronic devices must remain stored until you have completed the examination and left the examination room.
Possession of an unauthorized electronic or wearable device on your person or within reach during an examination will be treated as **unauthorized access to an electronic aid and may be reported as suspected academic misconduct**, regardless of whether there is evidence that the device was actively used.
Photographing, recording, copying, reproducing, retaining, transmitting, posting, or distributing any portion of an examination is strictly prohibited.

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Use of Generative Artificial Intelligence (AI)

AI tools can be powerful learning partners. I strongly encourage you to use them to learn and clarify concepts, check your understanding, ask questions about the course material. These tools can also help you brainstorm, edit text for clarity and style, and polish written work. While AI may assist you, you are accountable for ensuring that your work is correct, and especially that you can reproduce or explain it independently.

- You may use AI tools to support your work, but you are solely responsible for the content and quality of everything you submit.
- For homeworks: use AI to learn or even help you brainstorm and revise, but remember that ultimately you need to understand the material yourself.
- Exams are paper-and-pencil: AI is not permitted.

Electronic Devices in class:

Devices are permitted in class but only for class-related use. Any other use (social media, working on other classes, etc.) makes it hard for students around you to focus. You can choose whether to attend class or not, but you are not allowed to disrupt the classroom environment by unapproved use. **I may ask you to leave the class if you disrupt the learning environment.**

Course Policies:

- Please read the Sociology Department Academic Policies document below.

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