



The University of Western Ontario
SOCIOLOGY 2205B-001
Statistics for Sociology
Winter 2025

Delivery Method: in-person

Instructor: Dr. Anna Zajacova

Office Hours: TBD **Email:** SOC2205.W25@gmail.com

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](#).

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

- Critically assess the presentation of statistical data in everyday life

COURSE MATERIALS

1.

Textbook “Introductory Statistics 2e” (second edition) by Illovsy and Dean (2024), 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 the printed book for a reasonable price. We will only cover select chapters and chapter sections – I will indicate which sections to read each week in the slides.

2.

Statistical software Stata, installed on your laptop (yes, this is **REQUIRED**). Please purchase a **6-month license for Stata Version BE** from <https://www.stata.com/order/new/edu/profplus/student-pricing/> for \$48 USD.

Must be installed during the first week of class. Note [Stata-compatible operating systems](#): you will need a laptop; you cannot install the app on your phone or most tablets. We will be using Stata all through the semester and access to it is necessary.

The installation may require a bit of patience but it's not too bad if you follow the instructions – I promise! You will not need Stata during exams, but exams will include questions requiring your understanding of Stata commands and output. You will also need Stata for class work, homework, and assignments.

3.

Calculator. Any will do, even the cheapest dollar-store calculator will be fine. Scientific calculators are not needed but are allowed.

COMMUNICATION

1. **The primary method of communication will be in-class announcements**, typically also written on weekly course slide decks and/or posted on Brightspace. If you miss a class, ask classmates about announcements and missed class material. Students are also responsible for checking the course on Brightspace on a regular basis for news and updates.
2. **Post questions on the [Forum](#) on our course Brightspace site.** We will aim to respond within 24 hours during the work week.
3. **Pose questions in class**
4. **You are always welcome to pop in during student hours!**
5. If you have a question specific to your personal situation, you can email your teaching team at SOC2205.W25@gmail.com. We will aim to respond within 48-72 hours. We may ask you to repost your question on the Forum and will answer it there for the benefit of your colleagues unless it's a question unique to you or your situation.

METHOD OF EVALUATION

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

Evaluation Breakdown

1. Weekly active presence quizlets	11%
2. Weekly homework assignments	10%
3. Midterm exam, in class during class time (Feb 26)	28%
4. Final exam, TBD (April exam period)	36%
5. Assignments (Feb 1 + April 2 by 9pm)	15%

IMPORTANT INFORMATION ABOUT EVALUATION

- 1. Weekly active presence quizlets.** During most or all classes, we will have a short 5-question quizlet on Brightspace. The goal of these regular checks is to encourage class attendance, doing homework every week, studying, and attending and following material along in class. **The lowest 2 scores are dropped automatically.** This can be low scores or zero scores due to missed quizlets. This is universal accommodation that covers all medical, personal, technical, connection, or any other circumstances or problems. No further accommodation is possible, for any reason. Note Academic Considerations don't apply to missed quizlets (see below).
- 2. Weekly homework assignments.** You will be asked to upload one or two homework problems every or almost every week. They are graded as pass/fail; the aim is to encourage regular work on the class material. **Up to 2 weeks can be missed** (that is, two lowest scores will be dropped automatically).
- 3. Midterm.** Paper-and-pencil, closed-book exam, mostly or exclusively multiple choice, during regular class period. Calculators are allowed. No formula sheets are provided or allowed; I will provide tables if/as needed.
- 4. Final exam.** Paper-and-pencil, closed-book exam, mostly or exclusively multiple choice. Calculators are allowed. No formula sheets are provided or allowed; I will provide tables if/as needed.
- 5. Assignments.** 2 assignments focused on practicing independent data analysis with Stata. Detailed instructions will be posted on Brightspace.

Makeup exams. There will be one makeup data for the midterm and one for the final. The dates are set by the Sociology Department. They are available **only** to students with official Academic Accommodation through the Academic Counselling Office. **Your instructor cannot make any exceptions.** If you get another excused absence for a makeup midterm, your midterm weight will be added to your final. If that happens for a makeup final exam, you will do the makeup with the summer term students.

Extra credit (up to 6 percentage points on top of final grade). Extra credit will be available for contributing to Forum discussions with correct, helpful, timely, and supportive answers to student colleagues. Every week, up to 2 students may be selected as 'master contributors' and awarded up to a 2-percentage-point bonus. A student may become a 'master contributor' up to 3 times during the semester. Thus, it is possible to earn up to 6 percentage-points bonus.

STUDENT ABSENCES AND ACCOMMODATIONS

Your instructor cannot provide any accommodation based on student requests. No exceptions are possible so we can be **fair** to all students.

If you are unable to meet a course requirement due to illness or other serious circumstances, please follow the procedures below.

University policy on academic considerations are described [here](#). This policy requires that all requests for academic considerations must be accompanied by a self-attestation. Further information about academic considerations, and information about submitting this self-attestation with your academic consideration request may be found here. Please note that any academic considerations granted in this course will be determined by the instructor, in consultation with the academic advisors in your Faculty of Registration, in accordance with information presented in this course outline.”

Students must familiarize themselves with the [Policy on Academic Consideration – Undergraduate Students in First Entry Programs](#). Students missing course work for medical, compassionate or extenuating circumstances can request academic consideration by completing a request at the central academic consideration portal. Students are permitted one academic consideration request per course per term without supporting documentation. Note that supporting documentation is **always** required for academic consideration requests for examinations scheduled by the office of the registrar (e.g. December and April exams) and for practical laboratory and performance tests typically schedule during the last week of the term. Students should also note that the instructor may designate one assessment per course per term that requires supporting documentation. This designated assessment is described elsewhere in this document. Please note that any academic considerations granted in this course will be determined by the instructor of this course, in consultation with the academic advisors in your Faculty of Registration, in accordance with information presented in this course outline. Supporting documentation for academic considerations for absences due to illness should use the [Student Medical Certificate](#) or, where that is not possible, equivalent documentation by a health care practitioner.

Students with an approved absence from an in-class test or exam will be required to write a makeup exam. Course professor or teaching assistant(s) may not be available to respond to questions during the makeup exam. Students should be aware that the make-up test will not necessarily be in the same format, be of the same duration, or cover the same material as the original test.

CLASS STRUCTURE

The classes will combine lectures on key concepts with student participation, individual and group exercises, hands-on work using Stata, problem solving, etc.

IMPORTANT DATES, COURSE SCHEDULE AND READINGS.

Jan 8	Week 1. Introduction Chapter 1: intro, 1.1-1.3
Jan 15	Week 2. Descriptives for categorical variables Chapter 1: 1.2, 1.3 Chapter 2: intro. Bar graph text in 2.1
Jan 22	Week 3. Descriptives for continuous variables Chapter 2: intro, 2.1-2.7
Jan 29	Week 4. Probability, distributions Chapter 3: intro, 3.1. Chapter 4: intro, 4.1, 4.2. Chapter 5: intro, 5.1. 5.2.
Feb 5	Week 5. The Normal distribution Chapter 6: intro, 6.1, 6.2 Assignment 1 due February 5 at 9pm
Feb 12	Week 6. Sampling distributions and confidence intervals for population mean Chapter 7: intro, 7.1-7.3 Chapter 8: intro, 8.1-8.3
Feb 19	Reading week, no class.
Feb 26	Week 7. No new material Midterm exam on February 26 in class, 4:30-6:00 pm.
Mar 5	Week 8. Hypothesis tests about a population mean, confidence interval Chapter 9: intro, 9.1-9.5
Mar 12	Week 9. Hypothesis tests about two population means Chapter 10: intro, 10.1, only skim 10.2., 10.3, 10.4
Mar 19	Week 10. Chi square test for pairs of categorical variables Chapter 3: 3.4 Chapter 11: intro, 11.1, 11.3-11.4
Mar 26	Week 11. Correlation and regression for pairs of continuous variables Chapter 12: intro, 12.1-12.4
April 2	Week 12. Correlation and regression – finish the material. Review. No new readings Assignment 2 due April 2 at 9pm

Final exam, time and place TBD.

Please note: Schedule and readings are subject to change.

AI policy in 2205

I strongly encourage the use of AI for studying and understanding the material; the tools are excellent at explaining the basic statistics we cover in class. Be aware that AI tools are generally not great at Stata code. However, it is essential that students critically evaluate the obtained information, exercise independent thinking, and engage in original research to synthesize and develop their own ideas, arguments and perspectives. The use of AI tools can serve as a starting point for exploring a topic, with students expected to uphold academic integrity by appropriately attributing all sources of information

and avoiding plagiarism. Essays, written assignments and/or lab reports should reflect primarily student's own thoughts and independent written work. Students must generate their own figures (e.g., graphs, diagrams) rather than using AI generated ones. By adhering to these guidelines, students contribute to a responsible and effective learning environment that promotes critical thinking and independent inquiry that allows them to produce original written contributions.

ACADEMIC POLICIES

Scholastic Offences: Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following web site:

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf

Plagiarism: Students must write their assignments in their own words. Whenever students take an idea from another author, they must acknowledge their debt both by using quotation marks where appropriate and by proper referencing such as footnotes or citations. Plagiarism is a major scholastic offence.

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<https://www.turnitin.com/>).

Students are expected to retain all research notes, rough drafts, essay outlines, and other materials used in preparing assignments. In the unlikely event of concerns being raised about the authenticity of any assignment, your instructor may ask you to produce these materials; an inability to do so may weigh heavily against you.

Computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

Copyright: Students may not record or distribute any class activity, including conversations during office hours, without written permission from the instructor, except as necessary as part of approved accommodations for students with disabilities. Any approved recordings may only be used for the student's own private use.

Absence from Course Commitments: Students must familiarize themselves with the Policy on Academic Consideration – Undergraduate Students in First Entry Programs

https://uwo.ca/univsec/pdf/academic_policies/appeals/academic_consideration_Sep24.pdf

Students missing course work for medical, compassionate or extenuating circumstances can request academic consideration by completing a request at the central academic consideration portal. Students are permitted one academic consideration request per course per term without supporting documentation. Note that **supporting documentation is always required for academic consideration requests for examinations scheduled by the office of the registrar (e.g. December and April exams)** and for practical laboratory and performance tests typically schedule during the last week of the term. Students should also note that the instructor may designate one assessment per course per term that requires supporting documentation. This designated assessment is

described in the course outline. Please note that any academic considerations granted in this course will be determined by the instructor of this course, in consultation with the academic advisors in your Faculty of Registration, in accordance with information presented in this course outline. Supporting documentation for academic considerations for absences due to illness should use the Student Medical Certificate https://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf or, where that is not possible, equivalent documentation by a health care practitioner.

Note: missed work can *only* be excused through one of the mechanisms above. Being asked not to attend an in-person course requirement due to potential COVID-19 symptoms is **not** sufficient on its own. Students should check the Western website to see what directives for Covid are to be followed. Western has been and will continue to follow directives established by the Middlesex-London Health Unit. That directive will state whether students should or should not come to campus/class and any other requirements (e.g., masks are mandatory). Please check on your own and do not email the instructor, the Department Undergraduate Advisor/Coordinator or the Faculty Academic Counselling Office.

Missed Tests and Exams: Students with an approved absence from an in-class test will be required to write a make-up test. The make-up test will not necessarily be in the same format, be of the same duration, or cover the same material as the original test. Course professors may not be available to respond to questions during the make-up test/exam slots.

Students with an approved absence from a final exam in December or April will be required to write a makeup exam known as a Special Examination. Permission to write a Special Examination may be granted on the basis of compassionate or medical grounds with appropriate supporting documentation provided to the student's Home Faculty Academic Counselling office.

Students who fail to write a make-up test or special examination will receive a grade of zero on that assessment. No other make-up opportunities will be provided unless further academic consideration is granted by the student's Home Faculty Academic Counselling office.

Religious Accommodation: Students should review the policy for [Accommodation for Religious Holidays](#). Where a student will be unable to write examinations and term tests due to a conflicting religious holiday, they should inform their instructors as soon as possible but not later than two weeks prior to writing the examination/term test. In the case of conflict with a midterm test, students should inform their instructor as soon as possible but not later than one week prior to the midterm.

Contingency plan for an in-person class pivoting to 100% online learning: In the event of a COVID-19 resurgence during the course that necessitates the course delivery moving away from face-to-face interaction, affected course content will be delivered entirely online, either synchronously (i.e., at the times indicated in the timetable) or asynchronously (e.g., posted on OWL Brightspace for students to view at their convenience). The grading scheme will **not** change. Any remaining assessments will also be conducted online as determined by the course instructor.

Accessibility Options: Students with disabilities or accessibility challenges should work with Accessible Education (formerly SSD) 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:

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic%20Accommodation_disabilities.pdf . Information regarding accommodation of exams is available on the Registrar's website:

www.registrar.uwo.ca/academics/examinations/accommodated_exams.html .

Mental Health: Students who are in emotional/mental distress should refer to Mental Health@Western <https://www.uwo.ca/uwocom/mentalhealth> for a complete list of options about how to obtain help.

Gender-Based and Sexual Violence: Western is committed to reducing incidents of gender-based and sexual violence (GBSV) and providing compassionate support to anyone who is going through these traumatic events. If you are experiencing or have experienced GBSV (either recently or in the past), you will find information about support services for survivors, including emergency contacts at the following website

https://www.uwo.ca/health/student_support/survivor_support/get-help.html .To connect with a case manager or set up an appointment, please contact support@uwo.ca .

Additional resources:

Registrar Services <http://www.registrar.uwo.ca>

Student Support Services <http://westernusc.ca/services>

Course Selection: Students are responsible for ensuring that their selection of courses is appropriate and accurately recorded, that all course prerequisites have been successfully completed, and that they are aware of any antirequisite courses they may have taken.

If a student enrolls in a course for which they do not have the prerequisites, they may be removed from the course and have it deleted from their record. This decision may not be appealed. A student will receive no adjustment to their fees in the event that they are dropped from a course for failing to have the necessary prerequisites.

If a student takes a course that is antirequisite to a course previously taken, they will lose credit for the earlier course, regardless of the grade achieved in the most recent course.

Please visit your Home Faculty Academic Counselling webpage for information on adding/dropping courses, academic considerations for absences, appeals, exam conflicts, and many other academic related matters:

https://registrar.uwo.ca/faculty_academic_counselling.html .

Bookstore: Search for Textbook availability and cost <https://bookstore.uwo.ca/textbook-search>