



The University of Western Ontario
SOCIOLOGY 2205B - 001
Statistics for Sociology
Winter 2023

Wednesday 9:30-12:30pm SH 3345

Delivery Method - in-person, Labs asynchronously

Instructor: Michael Haan, Associate Professor

Office Hours: Wednesdays 1:00-3:00

Department of Sociology, Office: SSC #5412

Email: mhaan2@uwo.ca

Teaching Assistants: Maria Ahmed, Lindsay Finlay, Yuchen Li, and Merita Limani. Your primary TA's office hours and zoom links are available on the lab assignment handout (to be uploaded to OWL on or before January 25)

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:

- To provide the basic skills necessary for summarizing and analyzing statistical data.
- To develop an appreciation of the analytical and philosophical complexities of using numbers to describe people.
- To gain a basic knowledge of Stata, a popular statistical analysis program.

In addition to participation in the weekly sessions, there are a series of 'mini-assignments' in the lab, each geared to helping you understand one or more components of statistical analysis. In many weeks, there will be both lectures and a lab session. In class we will discuss statistical theory and concepts, whereas in the lab the *practice* of statistical analysis will be the focus.

This is a statistics class, but no prior knowledge of statistics is assumed for the course. Online remedial resources (ie. <http://davidmlane.com/hyperstat/>) exist, and students are recommended to consult them if necessary. We will

work with several datasets and Stata, a widely-used statistics program. None of these is required however, because your TAs will spend a lot of time showing you how to use Stata in the labs.

Course Material:

- Haan, Michael, and Jenny Godley. *Statistics for Canadian Social Scientists, Third Edition*. © Oxford University Press. Available at the bookstore.
- A calculator capable of working with exponents and square roots, but **not** capable of storing text and/or equations.

Communication:

Students are responsible for checking the course OWL site (<http://owl.uwo.ca>) on a regular basis for news and updates. This is the primary method by which information will be disseminated to all students in the class.

How to Contact Me: I can be reached during my office hours or through email: mhaan2@uwo.ca

How to get important information:

I will periodically send information to you via OWL. I will also be available via email, and will answer any questions within 24 hours (it might take a little longer on weekends). If you ask a question that I think others in the class will be interested in, I reserve the right to send my response to everyone via OWL. I will not identify you as the person that asked the question.

Policy on Laptops and other Electronics/Phones in Class:

Laptops are permitted in class, but if it is observed that students are on social networking sites such as Facebook or Twitter, they will be told to close the lid and they will not be permitted to use it for the remainder of the class. Be sure that all cell phones are turned off at the beginning of class.

Method of Evaluation:

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

Grades are allocated as follows:

Test 1: February 15th	20%
Test 2: March 22nd	20%
Attendance:	15%
Mini-assignments (3 @ 5%):	15%
Final Exam (cumulative): TBA	30%

Policy on Exams

Every examination in this class (including the final) will be 3 hours long. It will be written in person, and only a calculator not capable of storing text is permitted. The calculator should be able to calculate exponents and square roots. No other devices or cheat sheets are permitted.

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.

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 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.

Student Absences:

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

Assessments worth less than 10% of the overall course grade:

Late assignments without academic accommodation will be deducted 10% per day.

Assessments worth 10% or more of the overall course grade:

For work totaling 10% or more of the final course grade, students must provide valid medical or supporting documentation to their Home Faculty Academic Counselling Office as soon as possible.

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.

If you do not complete any of the mini-assignments, you will get a zero for that assignment. No makeups are permitted.

Absences from Final Examinations:

Students must provide valid medical or supporting documentation to their Home Faculty Academic Counselling Office as soon as possible. Academic Counselling will determine eligibility to write a Special Examination (the name given by the University to a makeup Final Exam).

You may also be eligible to write the Special Exam if you are in a "Multiple Exam Situation" (e.g., more than 2 exams in 23-hour period, more than 3 exams in a 47-hour period).

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 of Social Science Academic Counselling Office.

Important Policies

Academic Consideration for Missed Work: Students must provide valid medical or supporting documentation in order to receive accommodation for missed work worth 10% or more of the final grade in the course. All required documentation for absences must be submitted to the Academic Counselling office of a student's Home Faculty. 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's policy on Accommodation for Medical Illness can be found at https://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf. The student medical certificate is available at https://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf.

Religious Accommodation: When a course requirement conflicts with a religious holiday that requires an absence from the University or prohibits certain activities, students should request accommodation for their absence in writing at least two weeks prior to the holiday to the course instructor and the Academic Counselling office of their Faculty of Registration. Please consult University's list of recognized religious holidays (updated annually) at <https://multiculturalcalendar.com/ecal/index.php?s=c-univwo>.

All students pursuing academic consideration, regardless of type, must contact their instructors no less than 24 hours following the end of the period of absence to clarify how they will be expected to fulfill the academic responsibilities missed during their absence. Students are reminded that they should consider carefully the implications of postponing tests or midterm exams or delaying submission of work and are encouraged to make appropriate decisions based on their specific circumstances.

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: [Academic Accommodation for Students with Disabilities](#).

Information regarding accommodation of exams is available on the Registrar's website:
www.registrar.uwo.ca/academics/examinations/accommodated_exams.html

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

A Note on 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.

Plagiarism Checking: 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/>).

Mental Health: Students who are in emotional/mental distress should refer to Mental Health@Western (www.uwo.ca/health/mental_wellbeing/index.html) for a complete list of options how to obtain help.

Please visit the Social Science Academic Counselling webpage for information on adding/dropping courses, academic considerations for absences, appeals, exam conflicts, and many other academic related matters:
[Academic Counselling - Western University \(uwo.ca\)](http://www.uwo.ca/academic_counselling/).

Western is committed to reducing incidents of gender-based and sexual violence and providing compassionate support to anyone who has gone through these traumatic events. If you have experienced sexual or gender-based violence (either recently or in the past), you will find information about support services for survivors, including emergency contacts at 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.

Course Schedule and Readings:

January 11: *Class 1 – Introduction: why would I want to learn statistics?*

January 18: *Class 2a - How to hate statistics less. Review of Basic Math.*
Class 2b - Levels of measurement.

January 25: *Class 3a – Frequencies. Chapter 3.*
Class 3b – Probability. Chapter 4.

February 1: *Class 4a – The normal curve. Chapter 5.*
Class 4b – Measures of Central Tendency and Variation. Chapter 6.

February 8: *Class 5a – Generalizing from samples to populations 1. Chapter 7.*
Class 5b – Sampling. Chapter 8.

February 15: *Class 6a – Generalizing from samples to populations 2. Chapter 9.*
Class 6b - Test 1

February 18th-26th **Spring Reading Week**

March 1: *Class 7a – Analysis with more than one variable: hypothesizing the existence of relationships. Chapter 10.*
Class 7b – Measuring Association between Dummy and Interval-Ratio Variables: t-tests with two samples. Chapter 11.

March 8: *Class 8a - Analysis of Variance 1. Chapter 15.*
Class 8b - Analysis of Variance 2. Chapter 15.

March 15: *Class 9a – Nominal measures of association. Chapter 12.*
Class 9b - Ordinal measures of association. Chapter 13.

March 22: *Class 10a - Interval/Ratio measures of association. Chapter 14.*
Class 10b – Test 2

March 29: *Class 12a – OLS regression 1. Chapter 16.*
Class 12b – OLS Regression 2. Chapter 16.

April 5: *Catch up*

Department Makeup exams for those with documented absences:

- Midterm; Friday March 10 12:00-3:00pm Location TBA
- Final: Monday May 1st 12:00-3:00pm Location TBA

Policy on Exams

Every examination in this class (including the final) will be 3 hours long. It will be written in person, and only a calculator not capable of storing text is permitted. The calculator should be able to calculate exponents and square roots. No other devices or cheat sheets are permitted.

Sample Exam Questions – there will be a mixture of question types for each exam, with 20-30 questions per exam.

1. Which of the following is NOT a nominal level variable?

- a. level of education
- b. zip code
- c. occupation
- d. make of auto

2. The variable socioeconomic status ranges from upper class to lower class and is an example of the

- a. nominal level of measurement
- b. ordinal level of measurement
- c. interval-ratio level of measurement
- d. ratio level of measurement

3. Which of the following can be treated as an interval-ratio variable?

- a. social security number
- b. zip code
- c. age
- d. hair color

4. Select the variable that can be measured at the interval-ratio level

- a. different types of crimes
- b. number of children in a family
- c. attractiveness of a person
- d. emotional stability

5. A valet parking attendant is interested in determining when she gets the biggest tips. To study this question, she records the size of the tip given by her customers on three extremely hot summer days, three warm spring days, and on three cold winter days. Complete an Analysis of Variance to test the differences between mean tips with significance ($\alpha = .05$), to determine which groups differ from each other.

	Hot Day	Warm Day	Cold Day
Tip	\$4.00	\$4.00	\$5.00
	\$2.00	\$6.00	\$6.00
	\$3.00	\$3.00	\$3.00

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