



The University of Western Ontario
SOCIOLOGY 2205A-001
Statistics for Sociology
Fall 2023

Delivery Method: In-person

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Office Hours: TBD

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This is a DRAFT only. Please see the course site for the final version.

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 in the class will be not on computation but on 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 (i.e., the media)

COURSE MATERIALS

1.

Textbook “Introductory Statistics” by Illovsy and Dean (2023), OpenStax, Rice University. This is a great textbook and available **FREE** online at <https://openstax.org/details/books/introductory-statistics>. You can view the chapters online or download pdfs. If you wish, you can also buy the actual printed book for a reasonable price. We will only cover select chapters and chapter sections – I will indicate which sections to read for each week in my instructions.

Additional materials, if any, will be made available on OWL.

2.

Statistical software: Stata (current version is 18). We will be using Stata throughout the semester and you will need access to it. Purchase a 6-month license for Stata Version BE from <https://www.stata.com/order/new/edu/profplus/student-pricing/> for \$48 USD. You will need to install the Stata on your laptops during the first week of class. The installation requires a bit of patience but it's not tricky if you just follow the instructions – I promise!

3.

You will also need a basic calculator – even the cheapest dollar-store calculator will be fine.

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.

Questions should be posted on Forum on our course OWL site. Your instructor team will aim to respond within 24 hours during workdays. If you email us, we will ask you to post your question on Forum.

METHOD OF EVALUATION

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

Evaluation Breakdown

1. Class attendance and participation	14%
2. Midterm exam	22%
3. Final exam	30%
4. Assignment 1	17%
5. Assignment 2	17%

Please work consistently throughout the semester. The timing, quantity, and types of assessment are carefully chosen to draw on a broad spectrum of your skills and strengths and to give you regular timely feedback on your learning.

Extra credit (up to 6%). Extra credit will be available for contributing to Forum discussions with correct, helpful, timely, and supportive answers or comments to student colleagues. Every week, up to 2 students will 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 6 percentage-points bonus.

ADDITIONAL INFORMATION

Class attendance/participation. Class attendance is mandatory. During most classes, I will pose questions to be answered via iClicker or to answers to OWL. The goal of this ongoing assessment is to encourage active participation, doing homework, studying, and following material along in class.

Lowest 25% of scores in this assessment category will be dropped automatically (this may include zeroes due to being absent); no further accommodation is possible.

Exams (both midterm and final) will be in-class, on-paper, closed book. Midterm will be 75 minutes; final 90 minutes. The exams will include multiple choice questions, as well as possibly some true/false items or fill-in-the-blanks, and short 'word' problems such as interpreting statistical output. Dates below.

Assignments will be brief independent data analyses in the form of an infographic or report of no more than 1,500 words. Underlying Stata log and do files or related underlying information may be a part of the mark as well. Due dates below. Work will be uploaded on OWL. Detailed information will be provided no less than 9 days prior to deadlines.

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:

Pertains to class attendance/participation. Lowest 25% of scores will be dropped; only the best 75% will be included in final mark calculation.

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 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. One makeup date will be provided for each exam. If a student has another valid absence for that makeup date, they will be asked to complete the exams in the Winter term.

CLASS STRUCTURE

The classes will combine lecturing on key concepts with student participation, individual and group exercises, hands-on work data analyses using Stata, problem solving, etc. In order to participate in the class, students are expected to watch assigned videos and complete assigned readings prior to class

IMPORTANT DATES, COURSE SCHEDULE AND READINGS. Topics tentative, subject to change

Sept 7	Week 1. Introduction Chapter 1: intro, 1.1-1.3
Sept 14	Week 2. Descriptives for categorical variables Chapter 2: intro, 2.1-2.3
Sept 21	Week 3. Descriptives for continuous variables Chapter 2: intro, 2.1-2.7
Sept 28	Week 4. Probability, distributions Chapter 3: intro, 3.1. Chapter 4: intro, 4.1, 4.2. Chapter 5: intro, 5.1
Oct 5	Week 5. Exam 1 on Oct 5.
Oct 12	Week 6. Sampling distributions Chapter 7: intro, 7.1-7.3
Oct 19	Week 7. Confidence interval for population mean, proportion Chapter 8: intro, 8.1-8.3 Assignment 1 due Oct 19.
Oct 26	Week 8. Hypothesis tests about a population mean Chapter 9: intro, 9.1-9.6.
Nov 2	Reading week, no class.
Nov 9	Week 9. Hypothesis tests about two population means Chapter 10: intro, 10.1-10.4
Nov 16	Week 10. Chi square test Chapter 11: intro, 11.1, 11.3-11.4
Nov 23	Week 11. Correlation Chapter
Nov 30	Week 12. Regression. Chapter Assignment 2 due Nov 30.
Dec 7	Week 13. Regression wrap up, review

Final exam, time and place TBD.

Please note: Schedule and readings are subject to change.

Academic Policies:

Please review the Department of Sociology “[Important Academic Policies](https://sociology.uwo.ca/undergraduate/courses/Academic_Policies.pdf)” document https://sociology.uwo.ca/undergraduate/courses/Academic_Policies.pdf for additional information regarding:

- Scholastic Offences
- Plagiarism
- Copyright
- Academic Accommodation
- Accessibility Options
- Mental Health

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