

**CARLETON UNIVERSITY**  
**DEPARTMENT OF SOCIOLOGY AND ANTHROPOLOGY**

**SOCI 3000A**  
**FALL 2023**  
**DESCRIPTIVE STATISTICS IN SOCIAL RESEARCH**

**Instructor:** Dr. Rania Tfaily

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**Pre-requisites & Precluded Courses:** Prerequisites: SOCI 2000 and third year standing.

Precludes additional credit for SOCI 2002 (no longer offered).

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**Course Description and Objectives:**

Why do we use statistics in social science research? What measures do we use to summarize data? How do we examine the relationships between two or more variables? How do we determine which graphs or charts to use to organize data and describe patterns/ trends? These are some of the questions that we address in this class.

This course teaches students how to use descriptive statistics in social science research. We review the research process with a special focus on empirical quantitative research. We discuss various measures for describing and summarizing data, including how to interpret tables, figures, and charts, and how to create them using Excel and Stata. Next, we delve into examining the relationships between two variables through bivariate tables, bivariate correlation, and bivariate regression. Finally, we look at multivariate statistics.

The course includes a computer lab component in which we learn how to use Excel and Stata to analyse survey data. We cover tasks such as opening and editing datasets, obtaining descriptive measures, creating graphs and charts, recoding existing variables, generating new variables, creating bivariate tables, and running correlations and regressions. Students are not expected to have prior knowledge or familiarity with Excel or Stata.

Please bring your laptop to class. If you wish to borrow a laptop rather than to bring your own, go to the ITS Services Desk located on the 4<sup>th</sup> floor of the MacOdrum library and borrow one of the library laptops before class starts. Please note that laptops are available on a 'first come, first-served' basis. To download Stata SE on your laptop, click on the following link and follow the instructions: <https://i.carleton.ca/its-software/stata-se/>.

Following the completion of this course, students are expected to be able to:

- Calculate and interpret basic descriptive statistics such as percentages, ratios, measures of central tendency, and measures of dispersion
- Create and interpret various graphs and charts to describe data
- Know the characteristics of the normal curve and understand its utility in statistics
- Create and interpret bivariate tables to analyze the relationship between two categorical variables

- Calculate and interpret bivariate correlations, line of best fit, and coefficient of determination
- Have some understanding of descriptive statistics used in empirical social science research
- Use Excel and Stata to analyze survey data

### **Diversity and Inclusion in Learning**

I strive to foster a learning environment in which students feel valued, supported, and respected. Sharing our perspectives and interpretations of the course material will enhance everyone's learning experience. I encourage students to ask questions, engage in class discussions, share their opinions, and debate with their fellow classmates and me, based on mutual respect and a desire to learn from each other.

Carleton University acknowledges the location of its campus on the traditional, unceded territories of the Algonquin nation. In doing so, Carleton acknowledges it has a responsibility to the Algonquin people and a responsibility to adhere to Algonquin cultural protocols.

### **Recommended Textbook:**

Roberts, Lance W., Jason Edgerton, Tracey Peter and Lori Wilkinson. 2015. *Understanding Social Statistics*. Don Mills, Ontario: Oxford University Press.

### **Course Requirements & Methods of Evaluation:**

It is of utmost importance that students attend class regularly, complete the in-class exercises, review lecture notes and textbook chapters, and submit their work on time. To do well in this course, students should dedicate several hours to study each week (excluding class time), ask questions in class and/or during office hours, start working on the assignments well in advance of the deadline, and regularly review course materials. The grade for this course is distributed as follows:

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|--------------------------|-----|
| • In-class participation | 15% |
| • Two assignments        | 30% |
| • Midterm Exam           | 25% |
| • Final Exam             | 30% |

#### ***In-class participation (15%)***

- Class attendance and participation are crucial for understanding the course material. Participation encompasses completing in-class exercises and engaging in class discussions. ***Students who consistently miss class sessions will receive a very low participation grade.***
- ***Bring a calculator, pens/pencils, and a notebook/ a set of blank papers to every class.***

#### ***Assignments (30%)***

- In this course, there are two assignments. The assignment questions will become available on Brightspace approximately one to two weeks before the due date. These questions will encompass: (a) problem sets involving calculations and interpretations of statistical

measures, and (b) data analyses and interpretation of statistical output using an assigned dataset.

- Assignments should be typed and submitted via Brightspace. Assignments that are not submitted on time will incur a penalty of 2.5% per day, unless a valid and **documented** excuse is provided.
- Students are encouraged to post their questions regarding the assignments on the Brightspace discussion board.

### ***Exams (55%)***

- This course includes two in-person closed-book exams: a midterm exam and a final exam.
- Exam questions typically encompass calculations and interpretations of statistical measures, short-answer questions, multiple-choice questions, and interpretations of Stata output. Statistical formulae are provided, and basic calculators are permitted during exams.

In accordance with the Carleton University Undergraduate Calendar Regulations, the letter grades assigned in this course will have the following percentage equivalents:

A+ = 90-100	B+ = 77-79	C+ = 67-69	D+ = 57-59
A = 85-89	B = 73-76	C = 63-66	D = 53-56
A - = 80-84	B - = 70-72	C - = 60-62	D - = 50-52
F = Below 50	WDN = Withdrawn from the course	DEF = Deferred	

### **Academic Regulations, Accommodations, Plagiarism, Etc.**

University rules regarding registration, withdrawal, appealing marks, and most anything else you might need to know can be found on the university's website, here:

<https://calendar.carleton.ca/undergrad/regulations/academicregulationsoftheuniversity/>

You may need special arrangements to meet your academic obligations during the term. For an accommodation request, the processes are as follows:

### **Academic Accommodations for Students with Disabilities**

The Paul Menton Centre for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at **613-520-6608** or **[pmc@carleton.ca](mailto:pmc@carleton.ca)** for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send your ***Letter of Accommodation*** at the beginning of the term, and no later than two weeks before the first in-class scheduled test or exam requiring accommodation (*if applicable*).

\*The deadline for contacting the Paul Menton Centre regarding accommodation for December full fall examinations is November 15, 2023.

### **For Religious Obligations:**

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist.

For more details, visit the Equity Services website: [www.carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf](http://www.carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf)

### **For Pregnancy:**

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website: [www.carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf](http://www.carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf)

### **For Survivors of Sexual Violence**

As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and where survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: [www.carleton.ca/sexual-violence-support](http://www.carleton.ca/sexual-violence-support)

### **Accommodation for Student Activities**

Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. <https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf>

### **Plagiarism**

Plagiarism is the passing off of someone else's work as your own and is a serious academic offence. For the details of what constitutes plagiarism, the potential penalties and the procedures refer to the section on Instructional Offences in the Undergraduate Calendar. Students are expected to familiarize themselves with and follow the Carleton University Student Academic Integrity Policy (See <https://carleton.ca/registrar/academic-integrity/>). The Policy is strictly enforced and is binding on all students. Academic dishonesty in any form will not be tolerated. Students who infringe the Policy may be subject to one of several penalties.

#### **What are the Penalties for Plagiarism?**

A student found to have plagiarized an assignment may be subject to one of several penalties including but not limited to: a grade of zero, a failure or a reduced grade for the piece of academic work; reduction of final grade in the course; completion of a remediation process; resubmission of academic work; withdrawal from course(s); suspension from a program of study; a letter of reprimand.

#### **What are the Procedures?**

All allegations of plagiarism are reported to the faculty of Dean of FASS and Management. Documentation is prepared by instructors and departmental chairs. The Dean writes to the student and the University Ombudsperson about the alleged plagiarism. The Dean reviews the allegation. If it is not resolved at this level then it is referred to a tribunal appointed by the Senate.

**Assistance for Students:**

Academic and Career Development Services: <https://carleton.ca/career/>

Writing Services: <http://www.carleton.ca/csas/writing-services/>

Peer Assisted Study Sessions (PASS): <https://carleton.ca/csas/group-support/pass/>

**Important Information:**

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- Student or professor materials created for this course (including presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the author(s). They are intended for personal use and may not be reproduced or redistributed without prior written consent of the author(s).
  - Check Brightspace regularly for announcements and course related materials.
  - This syllabus may undergo minor modifications throughout the term at the discretion of the instructor.
  - Standing in a course is determined by the course instructor subject to the approval of the Faculty Dean. This means that grades submitted by the instructor may be subject to revision. No grades are final until they have been approved by the Dean.
  - Carleton University is committed to protecting the privacy of those who study or work here (currently and formerly). To that end, Carleton's Privacy Office seeks to encourage the implementation of the privacy provisions of Ontario's *Freedom of Information and Protection of Privacy Act* (FIPPA) within the university.
  - In accordance with FIPPA, please ensure all communication with staff/faculty is via your Carleton email account. To get your Carleton Email you will need to activate your [MyCarletonOne account](#) through Carleton Central. Once you have activated your MyCarletonOne account, log into the [MyCarleton Portal](#).
  - Please note that you will be able to link your MyCarletonOne account to other non-MyCarletonOne accounts and receive emails from us. However, for us to respond to your emails, we need to see your full name, CU ID, and the email must be written from your valid MyCarletonOne address. Therefore, it would be easier to respond to your inquiries if you would send all email from your connect account. If you do not have or have yet to activate this account, you may wish to do so by visiting <https://students.carleton.ca/>
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## COURSE OUTLINE AND READING LIST

September 7 – Introduction

- Roberts *et al.*, chapters 1 & 2

September 14 – Percentages, Ratios and Measures of Central Tendency

- Roberts *et al.*, chapters 4 & 5

September 21 – Measures of Dispersion

- Roberts *et al.*, chapter 6

September 28 – Charts and Graphs

- Roberts *et al.*, chapter 7

October 5 – The Normal Distribution

***Assignment 1 due***

October 12 – The Normal Distribution (cont'd)

- Roberts *et al.*, chapter 8

October 19 – **Midterm Exam**

October 26 – No Class, Fall Break

November 2 – Bivariate Tables

- Roberts *et al.*, chapters 9 & 10

November 9 – Scatterplots and Bivariate Correlations

- Roberts *et al.*, chapter 11

November 16 – Bivariate Regression

- Roberts *et al.*, chapter 14

November 23 – Bivariate Regression & Multivariate Analysis

***Assignment 2 due***

- Roberts *et al.*, chapter 15

November 30 – Multivariate Analysis

- Roberts *et al.*, chapters 16 & 17

December 7 – Review & Practice Exercises

December 10-22 – **Final exam** to be scheduled by the University

### Important Dates and Deadlines: Fall 2023

August 29, 2023:	Deadline for course outlines to be made available to students registered in full fall, early fall, and fall/winter courses.
September 6, 2023:	Fall term begins. Full fall, early fall, and fall/winter classes begin.
September 19, 2023:	Last day for registration and course changes (including auditing) in full fall, late fall, and fall/winter courses.
September 30, 2023:	Last day to withdraw from full fall and fall/winter courses with a full fee adjustment.
October 6, 2023:	December examination schedule (fall term final and fall/winter mid-terms) available online.
October 9, 2023:	Statutory holiday. University closed.
October 23-27, 2023:	Fall break, no classes.
November 15, 2023:	Last day for academic withdrawal from full fall and late fall courses. Last day to request Formal Examination Accommodations for December full fall and late fall examinations and fall/winter midterm examinations from the Paul Menton Centre for Students with Disabilities. Note that it may not be possible to fulfil accommodation requests received after the specified deadlines.
November 24, 2023:	Last day for summative tests or examinations, or formative tests or examinations totaling more than 15% of the final grade, in full fall term or fall/winter undergraduate courses, before the official December final examination period (see examination regulations in the Academic Regulations of the University section of the Undergraduate Calendar/General Regulations of the Graduate Calendar).
December 8, 2023:	Fall term ends. Last day of full fall and late fall classes. Classes follow a Monday schedule. Last day that can be specified by an instructor as a due date for term work for full and late fall courses.
December 9, 2023:	No classes or examinations take place.
December 10-22, 2023:	Final examinations in full fall and late fall courses and mid-term examinations in fall/winter courses will be held. Examinations are normally held all seven days of the week.