



## Department of Political Science Faculty of Arts

### POLI 399-L01 Quantitative Research Methods Winter 2022 (revised)

**Instructor:** Dr. Kim-Lee Tuxhorn

**Instructor's Telephone:** 403-220-3651

**Instructor's Office:** SS742 (Social Science Building)

**Instructor's Office hours:** MW 10:00-11:30 or by appointment

**Instructor's Email:** kimlee.tuxhorn@ucalgary.ca. Email is the best way to contact me. I usually respond on the same day if you email me on business days before 5pm.

**Course Day/Time:** MWF 9:00 - 9:50

**Lecture Location:** ST 139

**Course website with additional materials:** This syllabus, course slides, and all supplemental reading material can be found on the course's D2L page <https://d2l.ucalgary.ca/>.

**Tutorials:** Thursday 09:30 - 11:00; Thursday 12:30 - 14:00, Friday 1pm - 2:30pm

**Tutorial Location:** SS 020 (Social Science Building)

**Tutorial Assistants:** TBD

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### Course description

This course is designed to introduce students to the skills for interpreting, conducting, presenting, and analyzing political science statistical research. The course will be taught using a variety of pedagogical tools including lecture, student-paired exercises, and in-class problem solving. During class sessions students should be prepared to interact with their fellow peers and the instructor on a regular basis.

Over the course of the term, you will learn how to think like social scientists while developing various skills required by the discipline: how to choose which method to employ, how to undertake original research (complete with data collection and analysis), and how to present your findings in a professional manner. The goal at the end of this class is to help you understand and conduct quantitative political research that will be useful in both academic and professional settings.

### Course Objectives & Learning Outcomes:

On successful completion of this course, you will be able to:

- Describe and assess the logic of political science research;
- Understand the basic concepts and research design involved in social science research;

- Use statistical software for data analysis;
- Learn how to analyze data, communicate research findings and be an intelligent consumer of social science research.

## Required Textbooks

You are required to attend and be an active participant in class. The reading will be essential to doing well in this course. Required Texts:

1. **Textbook:** Lance W. Roberts; Jason Edgerton; Tracey Peter; Lori Wilkinson, Understanding Social Statistics (Oxford University Press, 2015).

## Required Technology

Classes will be conducted in person. However, given the rapidly changing nature of the pandemic, students must own, or have access to, a computer with internet connection.

## Required Software

Students will also be learning a statistics program called Stata. This will be accessible remotely for free via the Faculty of Arts computer labs, but students will need the University of Calgary's VPN to access the lab remotely, as well as additional downloads if they are Mac/Apple users. Detailed steps will be provided on D2L. Students may choose to purchase access to Stata for \$48USD for 6 months. To do this, visit this website and choose Stata/IC for 6 months: <https://www.stata.com/order/new/edu/gradplans/student-pricing/>. If you go this route, do NOT pay for one of the more expensive options: those are upsells for things you will never need in this course.

## Course Component Weights and Due Dates

<i>Component</i>	<i>Weighting</i>	<i>Dates</i>
Top Hat - Attendance and Participation	5%	Throughout the term
Assignments	30%	See class schedule for due dates
Mid-Term	30%	2/18
Registrar Scheduled Final Exam	35%	
Total	100%	

## Tutorials

Teaching Assistants (TAs) play an important role in assisting students with mastering the material in the course. The senior TA will lead the weekly tutorials and has set aside time each week for office hours.

Weekly tutorials take place during the term starting the second week of classes in the Arts Faculty Computer Lab located in the basement of the Social Sciences building, room SS020. You should have registered in one of the tutorial sections listed on page 1 of the syllabus when you registered for this class.

Students are encouraged to meet with TAs during office hours to address questions they might have with the course material, software and/or assignments.

**NOTE:** TAs have only a limited number of hours per week that they are allowed to devote to this course; reasonable expectations regarding responses to e-mail correspondence, especially on evenings and weekends, and for one-on-one meetings are requested.

Table 1: Tutorial Schedule

Week	Lab Topic	
Week 1	No LAB	
Week 2	Basics of Stata & Data Structure	
Week 3	Univariate 1- central tendency, types of variables	
Week 4	Univariate 2 - dispersion, data transformation	
Week 5	Bivariate 1 - nominal & ordinal variables	
Week 6	No LAB	
Week 7	Bivariate 2 - PRE: lambda only	
Week 8	Bivariate 3 - continuous variables	
Week 9	Trivariate 1 - crosstabs	
Week 10	Trivariate 2 -scatter plots	
Week 11	Multiple regression 1 - slope & effect size	
Week 12	Multiple regression 2 - confidence intervals	
Week 13	t-tests	
Week 14	No LAB	

## Class Schedule

Table 2: Class Schedule

Date	Lecture Topic	Lecture Readings	Assignment Due
1/10	Course Introduction		
1/12	Why stats is important	Textbook Ch.1	
1/14	The logic of social science	Textbook Ch.2	

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1/17	Data Structure	Textbook Ch.2	
1/19	Research Design	Textbook Ch.3	
1/21	Research Design		
1/24	Concepts, operationalization		Assignment 1
1/26	Univariate Analysis: types of variables	Textbook Ch. 4	
1/28	Univariate Analysis: central tendency	Textbook Ch.5, Ch. 6	
1/31	Univariate Analysis: dispersion	Textbook Ch.7	Assignment 2
2/2/	Univariate Analysis: normal curve	Textbook Ch.8	
2/4	Understanding Relationships	Textbook Ch.9	
2/7	Bivariate Analysis: scatterplots, correlations	Textbook Ch.11	Assignment 3
2/9	Bivariate Analysis: crosstabs	Textbook Ch.10	
2/11	Bivariate Analysis: crosstabs II	Textbook Ch.10	
2/14	Proportional Reduction in Error	Textbook Ch.12	Assignment 4
2/16	Wrap-Up	Textbook Ch.12	
2/18	Mid-Term Exam		
2/21- 2/25	Term Break (No Class)		
2/28	Bivariate Analysis: categorical variables	Textbook Ch.13	
3/2	Bivariate Analysis: continuous variables	Textbook Ch.14	
3/4	Multivariate Analysis - Day 1	Textbook Ch.15	
3/7	Multivariate Analysis - Day 2	Textbook Ch.15	Assignment 5
3/9	Multivariate Analysis - Day 3	Textbook Ch.16	
3/11	Multiple Regresssion - Day 1	Textbook Ch.17	
3/14	Multiple Regresssion - Day 2	Textbook Ch.17	Assignment 6
3/16	Multiple Regresssion - Day 3	Textbook Ch.17	
3/18	Sampling and inference	Textbook Ch.18	
3/21	Sampling distribution - Day 1	Textbook Ch.18	Assignment 7
3/23	Sampling distribution - Day 2	Textbook Ch.18	
3/25	Confidence Levels and Intervals - Day 1	Textbook Ch.19	

3/28	Confidence Levels and Intervals - Day 2	Textbook Ch.19	Assignment 8
3/30	Confidence Levels and Intervals - Day 3	Textbook Ch.19	
4/1	Hypothesis Testing - Day 1	Textbook Ch.20	
4/4	Hypothesis Testing - Day 2	Textbook Ch.20	Assignment 9
4/6	Hypothesis Testing - Day 3	Textbook Ch.20	
4/8	Wrap-Up	Textbook Ch.20	
4/11	Review session (optional)		Assignment 10

**Assignments (30%)** Over the semester there will be 10 short assignments. The seven (7) best grades out of the 10 assignments will be counted toward your final grade. Detailed instructions for each assignment will be announced in class and posted on D2L along with accompanying data files. The course tutorials are structured to assist students in successfully completing the assignments. The due dates for each assignment are noted in the Class Schedule.<sup>1</sup> All assignments must be submitted on D2L by 12pm on the day they are due. **Late assignments will NOT be accepted. If you miss an assignment or fail to submit one on time, please consider it one of your three “freebies” that do not count against your grade.** You may discuss assignments with your classmates, but all submitted work must be your own.

**Top Hat - Attendance and Participation (5%)** I expect class-preparation, which means taking notes on/thinking about the readings ahead of time. Discussion of concepts and applications will be an important part of this course, and thus participation counts for a sizable portion of your final grade. To aid discussion in the class, we will be using *Tophat*. I will also use *Tophat* to track participation and attendance. Students must answer at least 65% of Tophat questions to receive credit for this course component. **Please note that the attendance policy is very lenient to account for various student circumstances including, but not limited to student illness, poor weather, family emergencies, travel restrictions, and COVID-related issues.** All students are required to download *Tophat* by the end of the first week. For more information on downloading and using *Tophat* please visit the website at <http://elearn.ucalgary.ca/category/tophat/>. **NOTE:** Students are responsible for properly registering, using, and logging into their Tophat accounts.

**Exams (75%) (Mid-Term 30%, Final Exam 35%)** There will be two exams given during the term. The exams will focus on the material covered in the book, in lecture, and in the tutorials. All exams are closed-book. The Mid-Term and the Final will include multiple choice, true-false, and long answer questions. Study aids are not permitted during the exams. Students will be given 50 minutes for the Mid-Term Exam and 2 hours for the Final Exam. The Final Exam will be cumulative. Additional details of the exams will be given in class.

**REVISION:** The mid-term will be available on D2L at the beginning of class on Feb 18. and will be available for 24 hours. When you access the assessment, you will have the length of the class time plus 50 per cent [i.e., 75 minutes] to complete and submit it. This assessment will consist of multiple choice, short answers, and long answer questions. If you experience an issue that affects your ability to complete the assessment, which can include (but is not

<sup>1</sup> Class schedule and assigned due dates may be subject to change.

limited to) issues with technology, caregiving responsibilities, or distractions within your test-taking environment, you will need to contact your instructor as soon as possible to arrange an alternate or (in the case of technical issues) extended time to write the assessment.

## Grading

1. The following is the general guidelines on the percentage breakdowns for determining your final letter grade in the course: 100-95 A+, 94-90 A, 89-85 A-, 84-80 B+, 79-75 B, 74-70 B-, 69-65 C+, 64-60 C, 59-55 C-, 54-53 D+, 52-50 D, 49 and lower F. There are no extra credit assignments available in the course. Your final grade will be solely based on the assignments/components laid out above.

**Late Penalties** Late assignments will NOT be accepted. To avoid penalties, you are required to submit your assignment on D2L by 12:00pm on the day the assignment is due.

**Writing Statement:** Written assignments are often required in Political Science courses, and the quality of writing skills, including but not limited to such elements as grammar, punctuation, sentence structure, clarity, citation, and organization, will be taken into account in the determination of grades. Students are encouraged to make use of the services offered through Writing Support Services in the Student Success Centre by contacting them at <http://www.ucalgary.ca/ssc/writingsupport>.

**Late Penalties** Late reading assignments will not be accepted. Late research papers and research paper outlines will be marked down one letter grade for each day late.

**Instructor Guidelines** Students requiring assistance are encouraged to speak to the instructor during class or their office hours. Should you wish to meet outside of office hours, please email to make an appointment. It is to the student's advantage to keep such appointments.

Email is a common form of communication but it is not always the most effective way of answering student questions. If you cannot make office hours, please request a one on one meeting outside of these hours.

## **IMPORTANT POLICIES AND INFORMATION**

### **Supporting Documentation and the Use of a Statutory Declaration**

As stated in the University Calendar:

Students may be asked to provide supporting documentation for an exemption/special request. This may include, but is not limited to, a prolonged absence from a course where participation is required, a missed course assessment, a deferred examination, or an appeal. Students are encouraged to submit documentation that will support their situation. Supporting documentation may be dependent on the reason noted in their personal statement/explanation provided to explain their situation. This could be medical certificate/documentation, references, police reports, invitation letter, third party letter of support or a statutory declaration etc. The decision to provide supporting documentation that best suits the situation is at the discretion of the student. Students cannot be required to provide specific supporting documentation, such as a medical note.

Students can make a Statutory Declaration as their supporting documentation (available at [ucalgary.ca/registrar](http://ucalgary.ca/registrar)). This requires students to make a declaration in the presence of a Commissioner for Oaths. It demonstrates the importance of honest and accurate information provided and is a legally binding declaration. Several registered Commissioners for Oaths are available to students at no charge, on campus. For a list of locations to access a Commissioners for Oaths, visit [ucalgary.ca/registrar](http://ucalgary.ca/registrar)).

Falsification of any supporting documentation will be taken very seriously and may result in disciplinary action through the Academic Discipline regulations or the Student Non-Academic Misconduct policy.

This statement is accessible at: <https://www.ucalgary.ca/pubs/calendar/current/m-1.html>

### **Absence From a Mid-term Examination**

Students who are absent from a scheduled term test or quiz for legitimate reasons are responsible for contacting the instructor via email within 48 hours of the missed test to discuss alternative arrangements. A copy of this email may be requested as proof of the attempt to contact the instructor. Any student who fails to do so forfeits the right to a makeup test.

### **Deferral of a Final Examination**

Deferral of a final examination can be granted for reasons of illness, domestic affliction, and unforeseen circumstances, as well as to those with three (3) final exams scheduled within a 24-hour period. Deferred final exams will not be granted to those who sit the exam, who have made travel arrangements that conflict with their exam, or who have misread the examination timetable. The decision to allow a deferred final exam rests not with the instructor but with Enrolment Services. Instructors should, however, be notified if you will be absent during the examination. The Application for Deferred Final Exam, deadlines, requirements and submission instructions can be found on the Enrolment Services website at

<https://www.ucalgary.ca/registrar/exams/deferred-exams>.

### **Reappraisals**

The University Calendar states that for reappraisals of graded term work:

“A student who feels that a piece of graded term work (term paper, essay, test, etc.) has been unfairly graded, may have the work reappraised as follows. The student shall discuss the work with the instructor **within ten business days** of being notified about the mark or of the item's return to the class. If not satisfied, the student shall take the matter to the head of the department offering the course **within 2 business days of receiving the decision from the instructor**, who will arrange for a reappraisal of the work **within the next ten business days**. The reappraisal will only be considered if the student provides a detailed rationale that outlines where and for what reason an error is suspected.” See <https://www.ucalgary.ca/pubs/calendar/current/i-2.html>

The University Calendar states that for reappraisal of academic assessments (final grades):

“A student may request a reappraisal of a final grade. The only element that will be considered is the final assessment(s) that makes up the final mark (e.g., final examination, final project, and final paper). The exception is when a grade for a piece of graded term work is made available to students after the last day of classes for the term in which the course is scheduled; that grade may also be considered in a reappraisal of the final grade.”

“A student seeking a reappraisal of a final grade should first attempt to review the final assessment with the department or faculty offering the course. After which the student shall obtain a Reappraisal of Final Grade form from [ucalgary.ca/registrar](https://www.ucalgary.ca/registrar) (under Student Forms). The student must indicate exactly what error was made in marking the final assessment and/or in computing the final grade. The reappraisal will only be considered if the student provides a detailed rationale



that outlines where and for what reason an error is suspected.” More information is available at: <https://www.ucalgary.ca/pubs/calendar/current/i-3.html>

### **University Regulations**

Students are responsible for familiarizing themselves with the University policies found in the Academic Regulations sections of the Calendar at [www.ucalgary.ca/pubs/calendar/current/academic-regs.html](http://www.ucalgary.ca/pubs/calendar/current/academic-regs.html).

### **Student Accommodations**

Students seeking an accommodation based on disability or medical concerns should contact Student Accessibility Services; SAS will process the request and issue letters of accommodation to instructors. For additional information on support services and accommodations for students with disabilities, visit [www.ucalgary.ca/access/](http://www.ucalgary.ca/access/).

Students who require an accommodation in relation to their coursework based on a protected ground other than disability should communicate this need in writing to their Instructor.

The full policy on Student Accommodations is available at <http://www.ucalgary.ca/policies/files/policies/student-accommodation-policy.pdf>.

### **Plagiarism And Other Forms Of Academic Misconduct**

Academic misconduct in any form (e.g. cheating, plagiarism) is a serious academic offence that can lead to disciplinary probation, suspension or expulsion from the University. Students are expected to be familiar with the standards surrounding academic honesty; these can be found in the University of Calgary calendar at <http://www.ucalgary.ca/pubs/calendar/current/k.html>. Such offences will be taken seriously and reported immediately, as required by Faculty of Arts policy.

### **Required Access to Technology**

Please see the University’s resource page at [https://ucalgary.service-ow.com/it?id=kb\\_article&sys\\_id=86e7438013753ac06f3afbb2e144b031](https://ucalgary.service-ow.com/it?id=kb_article&sys_id=86e7438013753ac06f3afbb2e144b031)

### **Copyright Legislation**

As stated in the University of Calgary Calendar, Academic Regulations, “students are required to read the University of Calgary policy on Acceptable Use of Material Protected by Copyright and requirements of the copyright act to ensure they are aware of the consequences of unauthorised sharing of course materials (including instructor notes, electronic versions of textbooks etc.). Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy.”

<https://www.ucalgary.ca/policies/files/policies/acceptable-use-of-material-protected-by-copyright.pdf> and <https://laws-lois.justice.gc.ca/eng/acts/C-42/index.html>

### **Instructor Intellectual Property**

Course materials created by instructors (including presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the instructor. These materials may NOT be reproduced, redistributed or copied without the explicit consent of the instructor. The posting of course materials to third party websites such as note-sharing sites without permission is prohibited. Sharing of extracts of these course materials with other students enrolled in the course at the same time may be allowed under fair dealing.



### **Freedom of Information and Protection of Privacy (FOIP)**

FOIP legislation requires that instructors maintain the confidentiality of student information. In practice, this means that student assignment and tests cannot be left for collection in any public place without the consent of the student. It also means that grades cannot be distributed via email. Final exams are kept by instructors but can be viewed by contacting them or the main office in the Department of Political Science. Any uncollected assignments and tests meant to be returned will be destroyed after six months from the end of term; final examinations are destroyed after one year.

### **Evacuation Assembly Points**

In the event of an emergency evacuation from class, students are required to gather in designated assembly points. Please check the list found at [www.ucalgary.ca/emergencyplan/assemblypoints](http://www.ucalgary.ca/emergencyplan/assemblypoints) and note the assembly point nearest to your classroom.

### **Faculty of Arts Program Advising and Student Information Resources**

For program planning and advice, visit the Arts Students' Centre in Social Sciences 102, call 403-220-3580 or email [artsads@ucalgary.ca](mailto:artsads@ucalgary.ca). You can also visit [arts.ucalgary.ca/advising](http://arts.ucalgary.ca/advising) for program assistance.

For registration (add/drop/swap), paying fees and assistance with your Student Centre, contact Enrolment Services at (403) 210-ROCK [7625] or visit their office in the MacKimmie Tower, MT 116.

### **Important Contact Information**

Campus Security and Safewalk (24 hours a day/7 days a week/365 days a year)  
Phone: 403-220-5333

Faculty of Arts Undergraduate Students' Union Representatives  
Phone: 403-220-6551  
Email: [arts1@su.ucalgary.ca](mailto:arts1@su.ucalgary.ca), [arts2@su.ucalgary.ca](mailto:arts2@su.ucalgary.ca), [arts3@su.ucalgary.ca](mailto:arts3@su.ucalgary.ca),  
[arts4@su.ucalgary.ca](mailto:arts4@su.ucalgary.ca)  
Students' Union URL: [www.su.ucalgary.ca](http://www.su.ucalgary.ca)

Graduate Students' Association  
Phone: 403-220-5997  
Email: [askgsa@ucalgary.ca](mailto:askgsa@ucalgary.ca)  
URL: [www.ucalgary.ca/gsa](http://www.ucalgary.ca/gsa)

Student Ombudsman  
Phone: 403-220-6420  
Email: [ombuds@ucalgary.ca](mailto:ombuds@ucalgary.ca)

### **Campus Mental Health Resources**

The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the excellent mental health resources available

throughout the university community, such as counselling, self-help resources, peer support or skills-building available through the following resources:

*SU Wellness Centre:* <http://www.ucalgary.ca/wellnesscentre/>

*Student Wellness Services:*

<https://www.ucalgary.ca/wellness-services/services/mental-health-services>

*Campus Mental Health Strategy website:* <https://www.ucalgary.ca/mentalhealth/>.

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