



Department of Political Science  
Faculty of Arts

POLI 399-L01  
Quantitative Research Methods  
Winter 2019

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

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

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

**Instructor's Office hours:** WF 11:00-11:50 or by appointment

**Instructor's Email:** [kimlee.tuxhorn@ucalgary.ca](mailto: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 10:00 - 10:50

**Lecture Location:** EDC 388

**Course Anti-Requisites:** ENG 319, PSYC 300, 301, 312, SOC 311 & 315, STAT 205, 213, 217 & 327

**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:** T01 Tuesday 15:30-17:00; T02 Wednesday 8:00-9:30; T03 Wednesday 11:30-13:00

**Tutorial Location:** SS 018 (Social Science Building)

**Tutorial Assistants:** Holly Ching ([holly.ching1@ucalgary.ca](mailto:holly.ching1@ucalgary.ca)),

Meagan Cloutier ([meagan.cloutier1@ucalgary.ca](mailto:meagan.cloutier1@ucalgary.ca)), Brett Goodwin ([bogoodwi@ucalgary.ca](mailto:bogoodwi@ucalgary.ca)), Taruneek Kapoor ([tkkapoor@ucalgary.ca](mailto:tkkapoor@ucalgary.ca))

## 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: POLI 399 Stats Bundle by Roberts:

1. **Textbook:** Lance W. Roberts; Jason Edgerton; Tracey Peter; Lori Wilkinson, Understanding Social Statistics (Oxford University Press, 2015).
2. **Lab Manual:** Lance W. Roberts, Karen Kampen, Tracey Peter, The Statistics Coach: Learning Through Practice (Oxford University Press, 2010).

## Course Component Weights and Due Dates

<i>Component</i>	<i>Weighting</i>	<i>Dates</i>
Top Hat - Attendance and Participation	10%	Throughout the term
Assignments	30%	See class schedule for due dates
Mid-Term	25%	3/1/19
Registrar Scheduled Final Exam	35%	4/15 - 4/27/19
Total	100%	

## Tutorials

Teaching Assistants (TAs) play an important role in assisting students to master the material in the course. Brett Goodwin will lead the weekly tutorials and has set aside time each week for office hours. The tutorials will work with The Statistics Coach textbook/workbook, SPSS and the accompanying online data sets. You should review the assigned readings prior to the tutorial to ensure that you have adequate time to work through the exercises in class; doing so will allow you to get help during the tutorial. The TA will not walk through tutorial material for students who miss tutorials. You are also encouraged to download SPSS from the University's IT website to work on the assignments and problems at home; you can access the site here <http://www.ucalgary.ca/it/services/software> and we will review this in lectures and tutorials.

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 SS018. You should have registered in one of the tutorial sections listed on page 1 of the syllabus when you registered for this class.

Holly Ching, Meagan Cloutier, Taruneek Kapoor, Dr. Tuxhorn are responsible for grading the assignments. Holly Ching, Meagan Cloutier, and Taruneek Kapoor will also have set office hours each week to meet and assist students.

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.

## Class Schedule

Table 1: Class Schedule

Date	Lecture Topic	Lecture Readings	Assignment Due
1/11/19	Course Introduction		
1/14/19	Why stats is important	TBD	
1/16/19	The logic of social science	Textbook Ch.1	
1/18/19	The logic of social science	Textbook Ch.2	
1/21/19	Research Design	Textbook Ch.3	
1/23/19	Data Structure		
1/25/19	Concepts, operationalization	Posted on D2L	Assignment 1
1/28/19	Univariate Analysis: types of variables	Textbook Ch. 4	
1/30/19	Univariate Analysis: central tendency, dispersion	Textbook Ch.5, Ch. 6	
2/1/19	Univariate Analysis: normal curve	Textbook Ch.7, Ch.8	Assignment 2
2/4/19	Measurement Error: bias, inefficiency	Posted on D2L	
2/6/19	Understanding Relationships	Textbook Ch.9	
2/8/19	Bivariate Analysis: crosstabs	Textbook Ch.10	Assignment 3
2/11/19	Bivariate Analysis: scatterplots, correlations	Textbook Ch.11	
2/13/19	Proportional Reduction in Error	Textbook Ch.12	
2/15/19	Bivariate Analysis: categorical variables	Textbook Ch.13	Assignment 4
2/18-2/24	Mid-Term Break (No Class)	Textbook Ch.13	
2/25/19	Bivariate Analysis: categorical variables	Textbook Ch.13	
2/27/19	Review session		
3/1/19	Mid-Term Exam		
3/4/19	Bivariate Analysis: continuous variables	Textbook Ch.14	
3/6/19	Multivariate Analysis - Day 1	Textbook Ch.15	Assignment 5
3/8/19	Multivariate Analysis - Day 2	Textbook Ch.15	
3/11/19	Multivariate Analysis - Day 3	Textbook Ch.16	
3/13/19	Multiple Regression - Day 1	Textbook Ch.17	Assignment 6
3/15/19	Multiple Regression - Day 2	Textbook Ch.17	
3/18/19	Multiple Regression - Day 3	Textbook Ch.17	
3/20/19	Sampling and inference	Textbook Ch.18	Assignment 7
3/22/19	Sampling distribution	Textbook Ch.18	
3/25/19	Confidence Levels and Intervals - Day 1	Textbook Ch.19	Assignment 8
3/27/19	Confidence Levels and Intervals - Day 2	Textbook Ch.19	
3/29/19	Hypothesis Testing - Day 1	Textbook Ch.20	
4/1/19	Hypothesis Testing - Day 2	Textbook Ch.20	
4/3/19	Significance Testing - Day 1	Textbook Ch.21	Assignment 9
4/5/19	Significance Testing - Day 2	Textbook Ch.21	
4/8/19	Survey Research - Day 1	Posted on D2L	
4/10/19	Survey Research - Day 2	Posted on D2L	Assignment 10
4/12/19	Review session		

**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 (10%)** 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. 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/top-hat/>.

**NOTE:** Students are responsible for properly registering, using, and logging into their Tophat accounts.

**Exams (60%) (Mid-Term 25%, 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.

## 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.

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

Table 2: Tutorial Schedule

Week	Lab Topic	Lab Readings
Week 1	No LAB	
Week 2	No LAB	
Week 3	1. Basics of SPSS	Lab Manual Ch.1
Week 4	2. Univariate 1- central tendency, types of variables	Lab Manual Ch.2
Week 5	3. Univariate 2 - dispersion, data transformation	Lab Manual Ch.3, Ch.4
Week 6	4. Bivariate 1 - nominal & ordinal variables	Lab Manual Ch.5
Week 7	No LAB	
Week 8	5. Bivariate 2 - PRE: lambda and gamma	Lab Manual Ch.7
Week 9	6. Bivariate 3 - continuous variables	Lab Manual Ch.8
Week 10	7. Trivariate 1 - crosstabs	Lab Manual Ch.6
Week 11	8. Trivariate 2 -scatter plots	Lab Manual Ch.6
Week 12	9. Multiple regression 1 - slope & effect size	Textbook Ch. 17 (p. 321-332)
Week 13	10. Multiple regression 2 - confidence intervals, t-tests	Lab Manual Ch.9 & Ch.10
Week 14	No LAB	

**Writing Statement:** Written assignments are often required in Political Science courses, including this one, 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 (3rd floor of the Taylor Family Digital Library) or at <http://www.ucalgary.ca/ssc/writing-support>.

## Important Departmental, Faculty and University 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

<https://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/n-1.html>

**Absence From the 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 the 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 Enrollment 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 Enrollment Services website at <https://www.ucalgary.ca/registrar/exams/deferred-exams>.

**Appeals:** If you think that your assignment has been graded unfairly, we can talk about it during office hours (but not in the classroom during or right after class). However, before we meet in my office to talk about your grade, you must submit in writing an explanation detailing where (e.g. what question) and why you think that you received insufficient credit for your answer. Be forewarned: I will not accept explanations arguing that because you studied really hard for the test, your overall grade was just not high enough. You need to be able to show specific grading errors on my part. If the meeting does not resolve the matter, the student can then proceed with an academic appeal. The first in an academic appeal is to set up a meeting with the Department Head.

**University Regulations:** Students are encouraged to familiarize 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 [www.ucalgary.ca/policies/files/policies/student-accommodation-policy.pdf](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-5.html>. Such offences will be taken seriously and reported immediately, as required by Faculty of Arts policy.

**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.

**Policy on Recording Lectures:** Except for accommodation purposes, students may not record any portion of a lecture, class discussion or course-related learning activity without the prior and explicit written permission of the course instructor.

**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 <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 Library Block.

**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, arts4@su.ucalgary.ca  
Students' Union URL: [www.su.ucalgary.ca](http://www.su.ucalgary.ca)

Graduate Students' Association  
Phone: 403-220-5997  
Email: [ask@gsa.ucalgary.ca](mailto:ask@gsa.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**

SU Wellness Centre: <http://www.ucalgary.ca/wellnesscentre/>  
Campus Mental Health Strategy: <https://www.ucalgary.ca/mentalhealth/>