



2019–2020 Academic Year
Fall Session



DEPARTMENT OF POLITICAL SCIENCE
FACULTY OF ARTS

POLI 691 (L01)
Quantitative Analysis in Political Science

INSTRUCTOR	Dr. Brenda O'Neill
TELEPHONE	403.220.6710
OFFICE	726 Social Sciences Building
EMAIL	bloneill@ucalgary.ca
OFFICE HOURS	Tuesdays 1:00 – 2:00 p.m. or by appointment
LECTURE LOCATION	ST 147
LECTURE TIMES	Tuesday/Thursday 11:00 -12:15 p.m.
TUTORIALS	T01 Tuesday 2:00-3:15 pm SS018 (Sec. 2) T02 Friday 9:00 - 10:15 am SS018 (Sec. 2) T03 Friday 1:00-2:15 pm SS018 (Sec. 2)
TUTORIAL ASSISTANTS	Bryanne de Castro Rocha (bryanne.decastroroch@ucalgary.ca) Reed Merrill (reed.merrill@ucalgary.ca) Dakoda Trithara (dakoda.trithara1@ucalgary.ca)

Skepticism is the first step towards the truth.
(Found in a fortune cookie)

COURSE DESCRIPTION AND OBJECTIVES

This 'hands-on' course is an introduction to the fundamentals of quantitative analysis in the study of politics. In it students will learn some of the tools essential to an empirical political science research project: what questions to ask, how to operationalize theoretical concepts, how to think through causal relationships, and how to analyze quantitative data. In the tutorials, students will learn SPSS™, a statistical software package employed in the social sciences for data analysis and Excel™, a more commonly employed software package for producing charts and diagrams. Students will not only learn to become discerning *consumers* of social science research undertaken within and outside of the academic setting but also develop a number of basic skills necessary for becoming *producers* of such research.

The course involves lectures and tutorials and is designed to maximize the development of skills through exercises and assignments. As such, students must prepare for both lectures and tutorials. At a minimum, preparation consists of reviewing the assigned readings prior to the discussion of the topic in lectures or the review of a statistical technique in the tutorials. The tutorials are central to each student's success; their purpose is not a review of the lecture material but rather to provide instruction on the use of SPSS™ and Excel™, skills that are required to complete course assignments. Students can expect this course to be more consistently demanding than many other courses; the payoff is acquiring a set of skills and knowledge that will be of use in your remaining

courses and in your future careers.

At the end of the term students will have:

- developed a working knowledge of some of the various methods involved in conducting quantitative research in political science;
- become familiar with SPSS™ for data analysis and Excel™ for producing diagrams and charts to describe variables and relationships;
- become critical consumers of social science research undertaken by others; and
- developed practical experience in applying their knowledge through classroom and tutorial exercises.

POLI 691 AND POLI 399

This course is cross-listed with the undergraduate methods course POLI 399. As graduate students registered in POLI 691, you will attend POLI 399 lectures and tutorials (the latter led by one of your peers). Apart from this, the course will differ in several ways from its undergraduate equivalent. Your reading load will be a little heavier and you will write a research report instead of a final exam. And finally, I will grade all of your course work. Feel free to see me outside of office hours as necessary with any questions that you might have. If my door is open, just knock.

REQUIRED TEXTBOOKS

Three books are required for the course and are available at the bookstore. Feel free to purchase used copies of the Noack and/or Rowntree textbooks if they are available.

- 1) Andrea M. Noack, *Social Statistics in Action: A Canadian Introduction*. Don Mills: Oxford, 2018. Also on reserve in TDFL. The student companion site includes study guides and practice questions. Find it here: https://oup-arc.com/access/noack-1e-student-resources#tag_additional-chapters
- 2) Derek Rowntree. *Statistics Without Tears: An Introduction for Non-Mathematicians*. Penguin House UK, 2018 (Any edition of this book is fine). Also on reserve in TDFL.
- 3) Lance Roberts, Karen Kampen and Tracey Peter, *The Statistics Coach: Learning Through Practice*, Don Mills, ON: Oxford University Press, 2010. The student companion site includes a number of data sets that you will use in the tutorials. Find them here: http://www.oupcanada.com/higher_education/companion/sociology/9780195426595/student_resources.html

I would also encourage you to get a copy of the following book, either by buying it outright (used copies are likely available at the bookstore or at Bound and Copied) or by borrowing it from the library. It will be helpful for writing your research paper.

- 1) Gary D. Bouma, Rod Ling and Lori Wilkinson, *The Research Process* (first, second or third Canadian edition), Don Mills, ON: Oxford University Press.

Supplementary: The following books, in addition to the Noack and Rowntree textbooks, have been placed

on reserve at TFDL as supplemental readings should you require additional assistance when trying to grasp a statistical concept or tool. To search for these listings, go to the library website, click on the [Reserve Readings Link](#), and then enter POLI691 (or POLI399) in the Course Number search box.

- 1) George Argyrous, Statistics for Research: With a Guide to SPSS, 3rd edition. Thousand Oakes, CA: Sage Publications, 2011.
- 2) Earl Babbie, The Practice of Social Research, 14th edition. Boston, MA: Cengage Learning, 2016.
- 3) Jarol B. Manheim, Richard C. Rich, Lars Willnat and Craig Leonard Brians, Empirical Political Analysis: Research Methods in Political Science, 6th edition, Toronto: Longman, 2006.
- 4) P. Kellstedt and Guy D. Whitten, The Fundamentals of Political Science Research, 2nd edition. New York, NY: Cambridge University Press, 2013.
- 5) Lance Roberts, Jason Edgerton, Tracey Peter, and Lori Wilkinson, *Understanding Social Statistics*, Don Mills, ON: Oxford University Press, 2015.

GRADE DISTRIBUTION

Requirement	Dates	Weight
Research Report: Outline	Monday, October 21	10%
Research Report: Final Report	Wednesday, December 11	30%
Assignments	TBA	30%
Quizzes	Throughout term	30%

ASSIGNMENTS

Students are required to complete a set of four assignments worth 30% of the overall course grade using the skills learned in the labs. Further information on the topics and schedule for these assignments will be discussed in class and posted on D2L. Students are encouraged to work together on tutorial assignments; students must, however, submit their own original work to avoid charges of plagiarism.

In an effort to reduce paper waste, assignments will be submitted and returned electronically via D2L. All assignments **must** be saved in a common word processing program (e.g. .pdf, .doc or .rtf). Any submitted assignments that cannot be opened or that are blank will receive late penalties from the day that the assignment was due; no exceptions will be made to this rule. This means that “I sent the wrong version of the file...” is not a valid reason for having late penalties waived. Students are responsible for keeping the confirmation email sent by D2L for the receipt of assignments; this email must be produced to avoid any late penalties for assignments that go astray. Instructions on how to submit documents to D2L’s Dropbox can be found here: [D2L Instructions](#). Please make sure to clearly identify your work by including your name, student number and course number on the first page of your assignment.

NOTE: Assignments will not be accepted after the due date except in exceptional circumstances. Students must contact the instructor (not one of the TAs) **before the assignment due date** to explain their circumstances for any extension requests to be considered.

RESEARCH REPORT

A research report (an outline and example can be found in Chapter 14 and Appendix A of Bouma, Ling and Wilkinson) summarizes the key findings of a research project. The research project for this course requires establishing hypotheses about the political behaviour and opinions of Canadians, based on published research, and testing these statistically with the data sets employed in the tutorials. I will organize a short workshop before the report outline is due in October to go over things and respond to any questions. Alternatively, students can choose to use a data set that addresses their own research interests more directly; however, you must obtain my approval for any data set that you want to employ. Such approval must be obtained before the end of September. This is non-negotiable.

Additional readings to help prepare the report include:

- Paul Kellstedt and Guy Whitten, *The Fundamentals of Political Science Research* (New York, NY: Cambridge University Press, 2009), Chapter 5 (Book is on reserve at TFDL and chapter 5 is online on the D2L course site).
- Shively, *The Craft of Political Research*, Chapters 2, 4 and 5 (several copies are available at TFDL).

The research report will be completed in two stages. The first part, the outline, includes your research question, a bibliography for your research question (a minimum of 10 sources), a causal model of the hypotheses that you will test with your data and a breakdown of the specific variables that you will use to operationalize the measures employed in your analysis. This part of the report is due on October 21st and is worth 10% of the overall course grade. The second and final stage is a complete research report (between 22 and 25 double spaced pages) due on December 11th and worth 30% of the course grade. Further information on this assignment will be provided in class and on D2L.

QUIZZES

Three closed-book quizzes (25 minutes each) will take place in class throughout the term. These will count for 30% of the overall course grade. The quizzes will cover new material presented in lectures and tutorials; that is, the first quiz will cover all material from the start of term, the second will cover all material since the first quiz, and so on. The format of the quizzes is short answer and multiple choice type questions. Makeup quizzes will only be held on a limited number of days throughout the term.

Note: The quality of writing, focused primarily on its role in determining the clarity of responses in assignments and quizzes, but more comprehensively for the research report, will be taken into account in the determination of grades.

TUTORIALS AND TUTORIAL ASSISTANTS

Teaching Assistants (TAs) play an important role in assisting students to master the material in the course through the tutorials. The tutorials will work with *The Statistics Coach* textbook/workbook 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 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, in the various sections of rooms 018 and 020. 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.

D2L

D2L is an essential tool in this course. Students must ensure that their current University of Calgary e-mail address is on file with IT services to receive e-mail correspondence through D2L. They are also responsible for checking the site several times a week throughout the term. Updates are posted after each lecture so that you will know where we are on the syllabus.

PROPER USE OF EMAIL

Students requiring assistance are encouraged to speak to their instructor and/or TAs during scheduled office hours. Should you wish to meet outside of office hours, please telephone or email to make an appointment.

Students rely too heavily on email as a form of communication with their instructors and TAs. Email is rarely appropriate for explanations of concepts covered in the course, requests for extensions, or for personal concerns; as such, these will not be dealt with via email. Additionally, given the volume of email received on a daily basis, please ensure that you employ your U of C email account for course related correspondence, and be sure to identify your name and the course in which you are currently registered. All correspondence should be professional in tone and content.

RECORDING LECTURES

Recording of lectures and labs is allowed for accommodation purposes for students registered with SAS; allowing it for individual private study is only at the discretion of the instructor. Any other use of recording constitutes academic misconduct and may result in suspension or expulsion. Please contact the instructor for further information.

COURSE SCHEDULE AND REQUIRED READINGS: The schedule is tentative and may change if the need arises. Not all topics will be given equal time or weight. Please note that all readings are required.

Topic 1 **Introduction to the Course and Review of the Syllabus**

Topic 2 **The Role of Statistics in Political Science**

- *Statistics for Research*, pp. 1-10
- *Statistics Without Tears*, Chapter 1
- Nørgaard, Asbjørn S., "Political Science: Witchcraft or Craftmanship? Standards for Good Research." *World Political Science Review* 4:1 (2008), 1-28.

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.

- Bond, Jon R., “The Scientification of the Study of Politics: Some Observations on the Behavioral Evolution in Political Science.” *The Journal of Politics* 69:4 (2007), 897-907.

- Topic 3 **Variables and Measurement**
- *Statistics for Research*, pp. 10 -20
 - *Statistics Without Tears*, Chapter 2
- Topic 4 **Data Visualization: More than Pretty Pictures**
- *Statistics for Research*, Chapter 2 and Appendix A
- Topic 5 **Univariate Analysis I: Categorical Data**
- *Statistics for Research*, Chapter 3
- Topic 6 **Univariate Analysis II: Interval Data**
- *Statistics for Research*, Chapter 4
 - *Statistics Without Tears*, Chapters 3 and 4
- Topic 7 **Probability, Sampling and Weights**
- *Statistics for Research*, Chapter 5
- Topic 8 **Sampling Distributions and Confidence Intervals**
- *Statistics for Research*, Chapter 6
 - *Statistics Without Tears*, Chapter 5
- Topic 9 **Hypothesis Testing and Statistical Significance**
- *Statistics for Research*, Chapter 7
- Topic 10 **Bivariate Analysis: Categorical Data**
- *Statistics for Research*, Chapter 9
- Topic 11 **Bivariate Analysis: Interval Data**
- *Statistics for Research*, Chapter 10
- Topic 12 **Linear Regression**
- *Statistics for Research*, Chapters 11 and 12
- Topic 13 **Review and Q&A Session**

TUTORIAL SCHEDULE

A schedule of topics and readings for the tutorials can be found below. Students must have a registered account with IT (go to www.ucalgary.ca/it/register) and know their password to participate in the tutorials. The goal of the tutorials is to provide students with hands-on guidance and experience working with software packages designed for data analysis and presentation. Each one will start with a brief presentation outlining how to use the software and then proceed to short hands-on exercises. Please note that in addition to the Roberts et al. book, the Noack book includes an SPSS primer in Appendix B called “SPSS Basics.”

<u>Tutorial Schedule</u>		
Week of	Topic	Required Reading Prior to the Tutorial
Sept. 5	NO TUTORIALS	
Sept. 9	General Introduction: SPSS, Data sets, D2L and Digital Dropbox.	▪ <i>The Statistics Coach</i> , Preface, pp. vii to x
Sept. 16	Introduction to SPSS	▪ <i>The Statistics Coach</i> , Lab1 and SPSS Essentials, Section 1: Getting Started
Sept. 23	Creating Charts and Graphs in Excel	▪ <i>Excel™ 2013 Charts and Graphs</i> by Bill Jelen, ebook available through TFDL, especially chapters 1 to 5
Sept. 30	Basic Univariate Analysis	▪ <i>The Statistics Coach</i> , Lab 2 and SPSS Essentials, Section 2: Describing Distributions
Oct. 7	Data Transformation	▪ <i>The Statistics Coach</i> , Lab 4 and SPSS Essentials, Section 4: Transforming Data
Oct. 14	Inference and Chi-square	▪ <i>The Statistics Coach</i> , Lab 9, and SPSS Essentials, Section 9: Inferential Statistics
Oct. 21	Inference and T-tests	▪ <i>The Statistics Coach</i> , Lab 10, and SPSS Essentials, Section 9: Inferential Statistics
Oct. 28	Bivariate Tables	▪ <i>The Statistics Coach</i> , Lab 5 and SPSS Essentials, Section 5: Producing Bivariate Tables
Nov. 4	Trivariate Tables	▪ <i>The Statistics Coach</i> , Lab 6 and SPSS Essentials, Section 6: Generating Trivariate Analysis
Nov. 18	PRE Measures for Crosstabs	▪ <i>The Statistics Coach</i> , Lab 7 and SPSS Essentials, Section 7: PRE Measures for Crosstabs
Nov. 25	Correlation and Regression	▪ <i>The Statistics Coach</i> , Lab 8 and SPSS Essentials, Section 8: Correlation and Regression
Dec. 2	NO TUTORIALS	

GRADE SCALE

All term work will receive a percentage grade, which will then be weighted according to the assignment's value towards the final grade. The total summed percentage for all term work will then be translated into an overall letter grade according to the above scale. Grades will be posted to D2L on a regular basis; students should check it regularly to ensure that their assignments have been received and grades properly

recorded. Note: A posted grade of 0 normally means that the assignment was not received on the D2L site. It is the student's responsibility to contact the instructor if an assignment does not appear to have been received.

A+ (91-100)	B+ (77-79)	C+ (67-69)	D+ (55-59)
A (85-90)	B (73-76)	C (63-66)	D (50-54)
A- (80-84)	B- (70-72)	C- (60-62)	F (0-49)

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](https://www.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](https://www.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>

Please note that while the form of supporting documentation provided is at the discretion of the student, the instructor has the discretion not to accept the supporting documentation if it does not corroborate the reason(s) given for the exemption/special request.

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>.

Appeals:

If a student has a concern about the course or a grade they have been assigned, they must first discuss their concerns with the instructor. If this does not resolve the matter, the student then proceed with an academic appeal. The first step in an academic appeal is to set up a meeting with the Department Head. Appeals must be requested within 15 days of receipt of the graded assignment.

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/. 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>.

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.

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.

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>

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 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. You can also visit 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, arts2@su.ucalgary.ca, arts3@su.ucalgary.ca, arts4@su.ucalgary.ca

Students' Union URL: www.su.ucalgary.ca

Graduate Students' Association

Phone: 403-220-5997

Email: askgsa@ucalgary.ca

URL: www.ucalgary.ca/gsa

Student Ombudsman

Phone: 403-220-6420

Email: ombuds@ucalgary.ca

Campus Mental Health Resources:

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

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