

POLI 3492 Political Inquiry I
Dalhousie University, Fall 2015
Tuesdays and Thursdays, 1:05-2:25
LSC – Common Area C332

Instructor: Anders Hayden
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Course Description

This course is a general introduction to empirical research methods in political science and the social sciences more generally. It assumes no prior experience in this area. It covers a range of issues that are relevant to all kinds of empirical research, but the focus is on quantitative strategies (i.e., statistical analysis). Students will learn to understand the logic and assumptions behind statistical analyses, and gain practice with those methods to answer specific research questions using the statistical software package SPSS.

This course involves a fair amount of mathematical language, but it is really less about mathematics than it is about thinking logically about the research process and how to test knowledge claims. Readings and assignments keep the mathematics to a minimum necessary to understand key concepts. The goal is to understand quantitative analysis as a series of strategic/analytical choices. In other words, “I have this kind of problem. Which quantitative technique should I use, and how do I interpret the results?”

Course Format: Lectures and Lab Sessions

This is primarily a lecture course. There will be some overlap between the lectures and assigned readings, which is necessary to work through some of the more challenging concepts. However, lectures do not substitute for the readings and the readings do not substitute for the lectures. Students who do the assigned reading before class will have an easier time following the lecture and will likely do better on assignments and exams. (That is the case in all courses, but particularly so in this course, given the nature of the subject matter.)

If you find media articles related to course themes—i.e., which deal with the use of statistics in political debates or other social issues—that you would like to discuss in class, you are encouraged to bring them to the instructor’s attention.

Four of the classes will be replaced by computer lab sessions (see “Weekly Themes and Readings” below), where students will work semi-independently on small assignments using SPSS software. Lab instructions will be available on the course website.

Lab sessions will take place on October 15, October 29, November 17, and November 24. The class will be divided into two groups for the lab sessions. Students whose schedules allow it will attend a lab session from 2:35 to 3:55 p.m. on these days, while the remaining students will participate in a lab during the regular class time. *The lab schedule is subject to change* – any changes will be announced in class and on OWL.

Textbook, Readings on OWL, and Library Reserves

The course has a required book available at the university bookstore:

Buttolph Johnson, Janet and H.T. Reynolds. 2012. *Political Science Research Methods*, 7th edition. CQ Press. (Referred to below as PSRM).

I sympathize with anyone who feels that the textbook is quite expensive. If you want to keep costs down, you will likely be able to find used copies from online sources such as amazon.ca, where a lower cost kindle version is also available. However, if you buy a used copy, it will be more convenient for you if you get the seventh edition—earlier editions will be similar, but the content and required pages will not be identical.

Links to some readings will be provided through OWL.

Some recommended readings are taken from the books listed below, which are available on reserve in the Killam Library. (In addition to the recommended sections below, you may find the texts by Brians et al. and Berdahl & Archer text to be useful if you are looking for a more basic introduction than you will find in the textbook for some of the statistical concepts).

Brians, Craig Leonard et al. 2011. *Empirical Political Analysis*. 8th edition. New York: Pearson Longman. (An earlier edition of the text is also on reserve).

Berdahl, Loleen and Keith Archer. 2015. *Explorations: Conducting Empirical Research in Canadian Political Science*. Toronto: Oxford University Press Canada.

Van Evera, Stephen. 1997. *Guide to Methods for Students of Political Science*. Ithaca, NY: Cornell University Press.

Software and Computer Access

We will be using software called Statistical Package for the Social Sciences (SPSS), a.k.a. IBM SPSS Statistics. SPSS is installed on the computers in all of the student computer labs on campus. These labs are *not* open 24 hours a day so plan accordingly. For more details on the location and opening hours of the labs, see:

<https://dalu.sharepoint.com/sites/mydal/dc/ITS/Wiki/Computer%20Labs.aspx>

SPSS is also available on computers in the Library Learning Commons (located in the Killam, Kellogg, and Sexton libraries).

Back Up Your Work!

Be careful to make back-up copies of work-in-progress and update them frequently, particularly when working with large datasets (see below). Computer problems will only be accepted as an excuse for late or incomplete assignments in truly exceptional circumstances. If you have hardware or software problems, contact the Help Desk: <http://www.dal.ca/dept/its/helpdesk.html>.

Datasets

We will work with datasets, including:

- ARDA Cross-National Socio-Economic and Religion Data, drawing on UN Human Development Reports and Central Intelligence Agency World Factbook, 2011:

<http://www.thearda.com/Archive/Files/Descriptions/ECON11.asp>

- British Election Study 2001 (selected data):

http://college.cqpress.com/sites/Portals/57/resources/data/BES_Data.zip

- Canadian Election Study 2011: <http://ces-ec.org/data/CES2011-final.zip>

You will have access to these datasets on the T drive on all university computers.

TA Availability

There are no tutorial sessions for this class, but the TA will hold office hours during key times, e.g., the week before the midterm and the final week of class. (*This assumes that a TA is assigned to the class. If not, the instructor will inform you of a Plan B for grading the short assignments*).

Requirements and Grading

Short Assignments (4)	10%	Sept. 22; Oct. 1; Nov. 5, Nov. 24
Midterm	20%	October 8, during class
Quiz	10%	October 27, during first part of class
Preliminary outline for data analysis paper	5%	November 19
Data analysis paper	25%	December 8
Final exam	30%	Exam period

N.B. The requirements and grading may have to be revised if a TA is not assigned to the course.

Short Assignments

There will be four short assignments. They include a set of questions designed to test your understanding of basic concepts from lectures and readings and/or to provide experience with particular techniques. Assignments will be available on OWL. They should be submitted online through the “Assignments” area of the website, unless you are instructed otherwise. *Due dates may be revised depending on how quickly we progress through the course material.*

Optional Quizzes

There is a quiz associated with each chapter of the textbook, available at:

<http://college.cqpress.com/sites/psrm/home.aspx> (click on the chapter you want and look for “Quiz” at the top). These are not required and will not be graded, but you may find them useful to assess your level of understanding of the main concepts. They will also be useful to review concepts before exams, although they do not cover all the ideas that you will need to know.

Midterm Exam

In-class, October 8. The exam will test the ability to understand and apply basic concepts, techniques, and methodological issues/strategies. More information on the content and format of the exam will be made available in class prior to the exam. The midterm will cover all of the material raised in lectures and assigned readings up to, and including, the class of October 1.

Quiz

An in-class quiz will take place during the first part of the class on October 27. It will focus on the material covered from October 6 up to, and including, the class on October 22.

Final Exam

The final exam will cover material from the entire semester. It will be scheduled by the University Registrar. The final exam period is December 10-20. *Do not make travel plans until you know the date of the final exam.*

Data Analysis Paper (DAP)

Students will work in pairs to perform statistical analysis and write a report explaining their research plan and results. Each student should find his or her own partner and notify me by October 13. Students can only work on their own with special permission.

The DAP is intended to test students' capacity to apply what they have learned by identifying and pursuing a specific research problem.

Basic steps in the process:

1. Decide which **dataset** you want to work with. The main option is to work with the ARDA Cross-National Socio-Economic and Religion dataset, which is a compilation of data from various sources including the UN Human Development Reports and the CIA World Factbook. If you wish to work with another dataset, you should ask the instructor for permission. As you decide on a dataset, keep in mind both your interest in the subject matter of the dataset and the types of analysis that will be available given the levels of measurement of the variables (nominal, ordinal, interval or ratio).
2. Look through the data to identify **variables** that you might use to build a working hypothesis. It will help to start by looking for a *dependent variable* that seems interesting. Once you have your dependent variable, what kinds of other variables can you find in the data that might plausibly be seen to influence your dependent variable? (In other words, can you find some potential causes for your effect?)
3. Formulate a clear **hypothesis**.
4. Identify **control variables**, and **alternative hypotheses**, where appropriate.
5. Look in the scholarly **literature** for theory and research which is relevant to your hypothesis (i.e. research into the variables that affect your *dependent variable*). Do people argue about what causes variation in your dependent variable? If so, what are the rival theories? Which variables are often introduced as key independent or control variables? Where appropriate, go back and reconsider/reformulate what you have for steps 1-4, above. (If you are having trouble getting ideas for steps 3 and 4, you may find it helpful to jump to step 5 and look in the literature for possible hypotheses to test and variables to include.)
6. Think about whether any **measurement issues** might exist with your variables. What do you know about how your variable was measured? What do you not know? How might this matter?
7. Choose the right kind of statistical **analysis** for your variables—and get SPSS to do that analysis for you.
8. **Interpret** the results. Was your working hypothesis supported, or undercut, by what you found? (It's ok if your hypothesis was not supported—discovering that a hypothesis is not

supported by the available evidence is a key part of the advancement of knowledge.) What does this mean in terms of theoretical debates? What does this mean in terms of policy recommendations?

9. Write up a brief **report** (2000-3000 words, not including tables and graphs), presenting and explaining your research question, strategy, and results.

Every data analysis paper should have the following components:

1. a brief statement of the research problem (about ½ page)
2. a brief review of relevant scholarly literature (about 1 page)
3. a statement of the working hypothesis or hypotheses (about ¼ page)
4. an explanation of the research design, explicitly identifying independent, dependent, and control variables, some discussion of measurement and sampling issues, and a brief description and justification of the data analysis techniques chosen (3 pages)
5. a discussion of the data analysis results (about 2 ½ pages)
6. a brief discussion of theoretical and policy implications of the results (about ½ page)
7. a brief agenda for further research (about ½ page)

These are guidelines only. You don't have to do things exactly in this order. Particular sections might be a little shorter or a little longer. The most important thing is that you cover each of these different steps and explain each step carefully.

When writing up your report, refer to the assigned readings for December 1 (you may want to read ahead so that you do not leave the write-up until the last minute). You might also get some ideas about how to organize your report from the structure of other quantitative journal articles you have read, including those on the syllabus (e.g. Segal and Cover; York, Rosa, and Dietz). But keep in mind that for the purposes of this course, you need to make the steps you took in the process more transparent than in most published papers (i.e., just like in high-school math, you need to show your work).

By November 19, each pair of students must hand in a short report (one-page) on their DAP progress to date, outlining the proposed question, working hypothesis, dependent and independent variables (including control variables), the statistical procedure(s) you intend to use, and a preliminary bibliography.

The final version of the DAP is due on December 8.

Deadlines and Late Penalties

Any assignment received after the due date will be subject to a late penalty of 5% per day, unless appropriate written documentation such as a doctor's note is provided. Please plan your work well ahead of time to avoid this. (N.B. Special provisions apply to the assignment due on Oct.1, which will not be accepted after Oct. 5).

Plagiarism and Academic Integrity

All students in this class are to read and understand the policies on academic integrity and plagiarism referenced in the Policies and Student Resources sections of the <http://academicintegrity.dal.ca> website. Ignorance of such policies is no excuse for violations.

Any paper submitted by a student at Dalhousie University may be checked for originality to confirm that the student has not plagiarized from other sources. Plagiarism is considered a serious academic offence which may lead to loss of credit, suspension or expulsion from the University, or even to the revocation of a degree. It is essential that there be correct attribution of authorities from which facts and opinions have been derived. At Dalhousie there are University Regulations which deal with plagiarism and, prior to submitting any paper in a course, students should read the Policy on Intellectual Honesty contained in the Calendar or on the Online Dalhousie website. The Senate has affirmed the right of any instructor to require that student papers be submitted in both written and computer-readable format, and to submit any paper to be checked electronically for originality.

To ensure that you understand what plagiarism is, I suggest you take the following online quiz: <http://http://www.bc.edu/schools/cas/polisci/integrity/quiz.html>. You might find some surprises.

N.B. Almost every year that I have taught, I have had to penalize at least one student for plagiarism. In some cases, the violations appeared to be unintentional as the students did not understand the rules for the proper citation of others' work. **Don't let it happen to you**—or me (it's no fun for anybody).

If you have any questions about academic integrity and plagiarism, please ask.

Writing Centre Services

Learning to write well contributes to good marks, completion of degrees and, later, success in the workplace. Now is the time to improve your writing skills. You can visit the Writing Centre for assistance with your assignments. Staff and tutors help you to understand writing expectations and disciplinary conventions. The service is available six days a week.

To book an appointment call 494-1963; email writingcentre@dal.ca; visit the website for online booking at <http://dal.ca/writingcentre>; or drop in to the Killam Library's main floor Learning Commons (G40). (Tutors work in other locations such as on the Sexton Campus, Weldon Law Library, Black Student Advising Centre, and Native Education Centre.)

Visit the Writing Centre's Resource Guide at <http://dal.ca.libguides.com/writingcentre> for online guidance. Finally, see the website for the schedule of seminars on writing issues, including how to integrate source material appropriately into your work (avoid plagiarism).

OSAA Syllabus Statement on Accommodation

Students may request accommodation as a result of barriers related to disability, religious obligation, or any characteristic under the Nova Scotia Human Rights Act. Students who require academic accommodation for either classroom participation or the writing of tests and exams should make their request to the Office of Student Accessibility & Accommodation (OSAA) prior to or at the outset of each academic term (with the exception of X/Y courses). Please see www.studentaccessibility.dal.ca for more information and to obtain the Request for Accommodation – Form A.

A note taker may be required to assist a classmate. There is an honorarium of \$75/course/term. If you are interested, please contact OSAA at 494-2836 for more information.

Please note that your classroom may contain specialized accessible furniture and equipment. It is important that these items remain in the classroom so that students who require their usage will be able to participate in the class.

Heads Up

This is a relatively heavy course with a lot of reading and assignments. It is important that you keep up with concepts along the way—**if you miss key ideas at the beginning, then it will be hard to understand the statistical methods that we cover later.** The amount of reading goes down after September, but it is replaced by a lot of self-guided work on the data analysis paper. It is your responsibility to manage your time effectively and not leave work to the last minute.

Class Schedule (subject to change)

Sept. 10: Introduction: Why did they make you take this class, i.e., why do methods and statistics matter?

Required:

PSRM, Chapter 1, “Introduction,” pp. 1-29.

Miller, Laura. 2015. “What Are the Odds? To learn to think critically, take a statistics class.” *Slate*, August 31.

http://www.slate.com/articles/life/classes/2015/08/take_a_statistics_and_probability_class_in_college_to_improve_critical_thinking.html.

Sept. 15: What does it mean to study politics "scientifically?"

Required:

PSRM. Chapter 2, “The Empirical Approach to Political Science.” Pp. 33-67.

Keohane, Robert O. 2009. “Political Science as a Vocation.” *PS: Political Science and Politics* 42 (April):359-363.

Recommended:

Brians et al. 2011. Chapter 1, “Research as a Process,” pp. 1-15 in *Empirical Political Analysis*, 8th edition. New York: Pearson Longman.

Sept. 17: Hypotheses, Concepts, Variables, Theories

Required:

PSRM, Chapter 3, “Beginning the Research Process,” pp. 74-83 (Remainder of the chapter is recommended, but not required).

PSRM, Chapter 4, “The Building Blocks of Social Scientific Research: Hypotheses, Concepts, and Variables,” pp. 102-124.

Recommended:

Van Evera, Stephen. 1997. Chapter 1, “Hypotheses, Laws, and Theories,” in *Guide to Methods for Students of Political Science*. Ithaca, NY: Cornell University Press.

Brians et al. 2011. Chapter 2, "Explaining the Political World: Building Theories and Hypotheses," pp. 16-35 in *Empirical Political Analysis*. 8th edition. New York: Pearson Longman.

Sept. 22: Measurement Issues and Strategies

Assignment #1 due

Required:

PSRM Chapter 5, "The Building Blocks of Social Scientific Research: Measurement," pp. 127-149, 160. (Pp. 150-159 recommended but not required).

Sept. 24: Research Designs

Required:

PSRM Chapter 6, "Research Design," pp. 165-207, 213-214. (Pp. 207-213 recommended but not required).

Sept. 29: Population and Samples

Required:

PSRM, Chapter 7, "Sampling," pp. 222-252.

Oct. 1: Univariate Analysis I

Assignment # 2 due. (N.B. Assignments submitted after October 5 will not be accepted, i.e., late penalty for this assignment equals 100% after October 5).

Required:

PSRM, Chapter 11, "Making Sense of Data: First Steps," pp. 354-393.

Oct. 6: Univariate Analysis II

Required:

PSRM, Chapter 12, "Statistical Inference," pp. 396-425.

Oct. 8: Midterm Exam, In Class

Oct. 13: Bivariate Analysis I: Crosstabs

Deadline to inform the instructor of your choice of partner for the Data Analysis Paper.

Required:

PSRM Chapter 13, "Investigating Relationships Between Two Variables," pp. 428-463.

Oct. 15: LAB 1: Univariate Analysis

**Lab sessions. 2:35 to 3:55 p.m. in Rowe 3080 for those who are able to attend at this time. The remainder of the class will meet in Rowe 3080 during the regular class time, 1:05 to 2:25 p.m.

Oct. 20: Bivariate Analysis II: Difference of Means Tests

Required:

PSRM Chapter 13, "Investigating Relationships Between Two Variables," pp. 463-490.

Oct. 22: Bivariate Analysis III: Introduction to Bivariate Regression

Required:

PSRM Chapter 13, "Investigating Relationships Between Two Variables," pp. 490-500.

Segal, Jeffrey A. and Albert D. Cover. 1989. "Ideological Values and the Votes of U.S. Supreme Court Justices." *American Political Science Review* 83(2):557-564.

Oct. 27: In-class quiz (first part of class), continuation of Bivariate Regression

You may want to get a head start this week on the reading listed under November 3.

Oct 29: LAB 2: Bivariate Cross Tabs, T-Test, & Simple ANOVA

**Lab sessions. 2:35 to 3:55 p.m. in Rowe 3080 for those who are able to attend at this time. The remainder of the class will meet in Rowe 3080 during the regular class time, 1:05 to 2:25 p.m.

Nov. 3: Bivariate Analysis IV: Bivariate Regression, continued

Required:

PSRM Chapter 13, "Investigating Relationships Between Two Variables," pp. 500-521.

Nov. 5: Multivariate Analysis I: Multivariate Crosstabs

Assignment #3 due

Required:

PSRM Chapter 14, "Multivariate Analysis," pp. 527-538.

Nov. 10: Multivariate Analysis II: Introduction to Multiple Regression

Required:

PSRM Chapter 14, "Multivariate Analysis," pp. 538-550.

Nov. 12: Study Day (No Classes)

Nov. 17: LAB 3: Bivariate Regression

**Lab sessions. 2:35 to 3:55 p.m. in Rowe 3080 for those who are able to attend at this time. The remainder of the class will meet in Rowe 3080 during the regular class time, 1:05 to 2:25 p.m.

Nov. 19: Multivariate Analysis III: Multiple Regression, continued

Preliminary outline for data analysis paper due.

Required:

PSRM Chapter 14, "Multivariate Analysis," pp. 550-568, 590

York, Richard, Eugene A. Rosa, and Thomas Dietz. 2003. "Footprints on the Earth: The Environmental Consequences of Modernity." *American Sociological Review* 68:279-300.

Nov. 24: LAB 4: Multiple Regression

Assignment #4 due

**Lab sessions. 2:35 to 3:55 p.m. in Rowe 3080 for those who are able to attend at this time. The remainder of the class will meet in Rowe 3080 during the regular class time, 1:05 to 2:25 p.m.

Nov. 26: Multivariate Analysis IV

Required Reading TBA:

Depending on how far we have progressed with the material, the instructor may choose to include the following pages as required readings: PSRM Chapter 14, pp. 568-590 on logistic regression, or alternatively, Chapter 10, Pp. 306-347.

Dec. 1: Interpreting and Presenting Your Own Results

Required:

PSRM Chapter 15, "The Research Report," pp. 594-613.

Van Evera, Stephen. 1997. "How to Write a Paper." Pp. 123-128 in *Guide to Methods for Students of Political Science*. Ithaca, NY: Cornell University Press.

Kirshner, Jonathan. 1996. "Alfred Hitchcock and the Art of Research." *PS Political Science and Politics* 29(September):511-513.

Dec. 3: Research Ethics

In-class videos on Tuskegee, Milgram, and/or Zimbardo experiments.

Required:

Neuman, W. Lawrence and Karen Robson. 2015. "Ethics in Social Research." Pp. 42-63 in *Basics of Social Research: Qualitative and Quantitative Approaches*. Toronto: Pearson.

Dec. 8: Review Session for final exam

Data Analysis Paper due.