

The Dalhousie University Senate acknowledges that we are in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq People and pays respect to the Indigenous knowledges held by the Mi'kmaq People, and to the wisdom of their Elders past and present. I acknowledge the privilege of living on their land, my responsibility in understanding our shared history, and my role in disrupting the impact of colonialism here and in my South American homeland. I commit to protecting this sacred land for all our children and engaging in meaningful ways in our journey towards reconciliation. We are all Treaty people.

The Dalhousie University Senate also acknowledges the histories, contributions, and legacies of African Nova Scotians, who have been here for over 400 years.¹

Department of Political Science
POLI 3492: Political Inquiry I
Fall 2022
[Tuesdays and Thursdays, 17:35-18:55 p.m.](#)
Dunn 301A

Instructor Contact:

Instructor: Claudia Rangel (she/her)

E-mail: claudia.rangel@dal.ca

Virtual drop-in hours: Mondays 5:00-6:00 pm. ([Click this Team Meeting Link](#))

In-person Office hours (by appointment only): Henry Hicks, Room 352

Course platform: Brightspace Learning System (asynchronous)

Course Description

This course is a general introduction to quantitative research methods in political science and the social sciences more generally. It introduces students to the key statistical concepts (i.e., sampling distributions, measures of central tendency and dispersion, statistical significance) and methods (i.e., ANOVA, linear regression) used by political (and social) scientists to analyze data. A primary purpose of the course is to build a strong foundation for regression and linear models. In addition, the course will provide a hands-on introduction to statistical computing with R and RStudio. No prior familiarity with R is assumed.

¹ The Mi'kmaq People signed Peace and Friendship Treaties with the Crown, and section 35 of the Constitution Act, 1982 recognizes and affirms Aboriginal and Treaty rights. We are all Treaty people. For more information about the purpose of territorial acknowledgements, or information about alternative territorial acknowledgements if your class is offered outside of Nova Scotia, please visit <https://native-land.ca/>.

Class format

I anticipate our course will use a face-to-face format, with opportunities for virtual/remote office hours. In the event of unforeseen circumstances that could impact our scheduled sessions, I will communicate via Brightspace.

Minimal Technical Requirements

This class is very hands-on; be sure to bring a fully charged laptop to every class. This course will use the powerful and flexible R statistical software (<http://www.r-project.org>) and the popular IDE, RStudio (<http://www.rstudio.com/>). During the first part of the class, we will use an RStudio cloud environment to provide a gentle introduction to R and will focus on installing R and RStudio Desktop later in the term. Resources on installing them will be posted to the Brightspace course in due time.

I encourage you to be patient with yourself and with this course. It might seem overwhelming to be learning about coding, markdown, and scripts, on top of -likely- new statistical concepts, but I promise you the course is designed to accomplish our course learning goals. Using data appropriately and proficiently in Social Sciences requires a degree of comfort with the concepts and tools like those we will review in this course.

Throughout the course, we will be looking at data from various sources, as it is important to get familiar with key open data portals. For each week, relevant data sources will be included in the Brightspace course space.

Learning Management System Site Information

All course materials, including this syllabus, will be posted to the POLI 3492 Brightspace course space. Students are automatically enrolled in the course, so please email me if you do not have access. Content will become visible to you at the beginning of the week.

Course Learning Outcomes

Upon completion of this course, students will be able to:

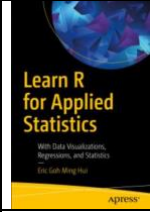

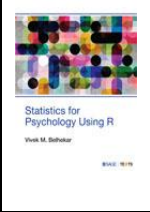
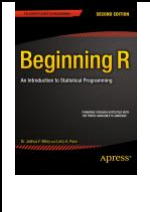

- Unified Use statistical software to summarize data numerically and visually, and to perform data analysis.
- Use summary statistics and graphs to conduct exploratory data analysis.
- Have a conceptual understanding of statistical inference sufficient to conduct social science research.
- Understand and critically evaluate data analysis found in research published or shared through public media.
- Leverage the skills and concepts learned in the course to complete a small research project from exploratory analysis to inference to modeling.
- Feel confident to continue learning how to effectively conduct their own data analysis: how to collect data, how to analyze data, and how to use data to make inferences and conclusions about issues and topics relevant to their discipline.

Required Text(s)

There is no required textbook for this class. There are many introductory textbooks on probability and statistics. I will provide references material relevant to a given topic through the Brightspace content for each week, and such material will be either open source or available as an e-book through the library.

(A few!) suggested resources:

Here I provide a few examples of good resources:

	https://ebookcentral-proquest-com.ezproxy.library.dal.ca/lib/dal/detail.action?docID=5608232&query=
	DAL Killam Library ; HA 32 H37 2021
	https://openintro-ims.netlify.app/index.html
	https://methods.sagepub.com/book/statistics-for-psychology-using-r
	https://link.springer.com/content/pdf/10.1007/978-1-4842-0373-6.pdf
	https://ebookcentral-proquest-com.ezproxy.library.dal.ca/lib/dal/reader.action?docID=6340974

Course Schedule

Week	Topic	Assessment	Assigned	due	mandatory	bonus points	notes
1	Welcome to the course!						
2	know your data	Homework 1: data in context	13-Sep	19-Sep	1	2	R code
3	Descriptive Statistics- visualizing data	Quiz 1	20-Sep	20-Sep	3		R code
4	Univariate descriptive statistics	Assignment 1	27-Sep	03-Oct	10	2	R code/ bonus: installing RStudio Desktop
5	Bivariate Association	Homework 2: learning log	04-Oct	10-Oct	3	2	R code
6	The Essentials of Probability Theory- distribution, sampling and samples	Homework3: data in context	11-Oct	17-Oct	5	2	R code
7	Testing Hypotheses	Quiz 2	18-Oct	18-Oct	5		R code
8	Making Comparisons -Statistical inference	Assignment 2	25-Oct	31-Oct	10	2	R Notebook
9	Making Comparisons- Non- Parametric	Homework 4: learning log	01-Nov	07-Nov	3	2	R Notebook
10	fall study break (No classes)	Final project proposal		14-Nov	5	2	annotated bibliography
11	ANOVA	Homework 5: data in context	15-Nov	21-Nov	5	2	R code, annotated bibliography
12	linear regression	Assignment 3	22-Nov	28-Nov	10	2	R Notebook
13	Multiple Regression	Assignment 4	29-Nov	05-Dec	10	2	R Notebook
		Quiz 3	01-Dec	01-Dec	5		R code
14	Putting it all together	Final project check-in	06-Dec				
14	Classes end Dec 07						
							R Notebook report including R code for analysis and graphs and annotated bibliography
	Final project due	final project		15-Dec	25	5	
	final grades posted			22-Dec			
		Highest possible score			100	25	125
		drop 1 assignment, 1 quiz and 1 homework with lowest score			80	20	100

Course Assessments

Quizzes

There will be three in-class short quizzes to provide additional guided exercises that will reinforce the content covered during class. Quizzes should be submitted at the end of the class through the provided Brightspace Dropbox.

Assignments

There will be four assignments. They include a set of questions designed to test your understanding of basic concepts introduced during class and provide the opportunity to get familiar with data analysis using R and RStudio. Deliverables should be submitted by the due date through the provided Brightspace Dropbox. Due dates may be pushed back, depending on our timely progression through the course material.

Homework

The course also includes four homework activities that aim to be lighter in statistics and code, as they focus on the application and interpretation of the concepts discussed in class, with particular emphasis to real world research. Deliverables should be submitted by the due date through the provided Brightspace Dropbox. Due dates may be pushed back, depending on our timely progression through the course material.

I have included bonus points for weekly deliverables, and it should allow you to drop one quiz, one assignment and one R script with the lowest score. Plan accordingly and aim to submit EACH deliverable.

Final Projects

The final project is worth 30% of the grade. The course is designed to provide students with the building blocks to produce a research report that includes key statistical analysis reviewed during the course. The final project is an individual assignment with a substantial commitment given it is the major deliverable of the course. The key to successfully completing this research report is to plan ahead, using the scheduled sessions for the project outline. The research project will include an R Notebook report with all the code used to derive the analysis, a question, an outline of the analysis and data used, and of course, a brief background of the question and a summary of results.

Course-specific policies

Attendance

This class is meant to be hands-on, but attendance is not mandatory. However, you are responsible for reviewing and learning the suggested reference material. In addition, you are responsible for reading pertinent material before each class. If you feel unwell, please do not come to class. All class material will be posted after class.

Learning environment

I aim to provide ALL students with valuable and positive class sessions that enhance their knowledge and skills in a safe, inclusive learning space and support diverse perspectives and experiences. I welcome an equally respectful and positive dialogue and appreciate your feedback on how to effectively deliver on this commitment.

Please let me know if your name or pronouns are not those reflected in the official class list.

If your performance or attention to the course is impacted by a negative experience in the class or at Dal, please reach out to someone you trust (or talk to me if you are comfortable). I invite you to check the resources included in this course outline.

I understand that your student commitments do not happen in isolation from your personal life and that emergencies do happen. I will try to support you to the extent possible. Still, it is your responsibility to reach out to me or a resource on campus with enough time to explore options (i.e., your Associate Dean, Department Chair, and Student Affairs advisors). Alternative assessment options are NOT guaranteed.

Culture of Respect

Substantial and constructive dialogue on challenging issues is an important part of academic inquiry and exchange. It requires willingness to listen and tolerance of opposing points of view. Consideration of individual differences and alternative viewpoints is required of all class members, towards each other, towards instructors, and towards guest speakers. While expressions of differing perspectives are welcome and encouraged, the words and language used should remain within acceptable bounds of civility and respect.

Assignment and quiz policy

You are welcome to collaborate with others only for the R code solutions to assignments and quizzes, and you should note your collaborator's name. Explanations and answers should be your own. Final projects should be derived independently.

I am committed to supporting your learning journey, but if you are not doing the work for the course, that is, if you are not invested in progressing through the course content, you should expect that reflected in your grades. If you feel you are falling behind, I invite you to reach out to me often and early.

Late quiz/assignments: will be subject to a late penalty of 1% on the first day, 2% on the second day, 3% on the third day and 5 %on the fifth and every subsequent day, unless appropriate written documentation is provided. I hope this encourages you to practice and submit all deliverables. Remember, the best way to derive value from the time you spend in this course is by engaging with the content with intention.

Student Declaration of Absence

The [Student Declaration of Absence Form](#) is available for POLI 3492 and replaces sick notes for absences of three days or fewer that result in missed or late academic requirements. You can submit the Student Declaration of Absence Form for this course through [Brightspace](#). To submit the form through Brightspace, click "Academic Support" in the top navigation, and then click "Student Self-Declaration of Absence". A list of your courses that accept the Student Self-Declaration of Absence Form, including POLI 3492 will be available on this page. Please contact me if you have any questions.

UNIVERSITY STATEMENTS

Internationalization

At Dalhousie, "[thinking and acting globally](#)" enhances the quality and impact of education, supporting learning that is "interdisciplinary, cross-cultural, global in reach, and orientated toward solving problems that extend across national borders."

Academic Integrity

At Dalhousie University, we are guided in all of our work by the values of [academic integrity](#): honesty, trust, fairness, responsibility and respect. As a student, you are required to demonstrate these values in all of the work you do. The University provides policies and procedures that every member of the university community is required to follow to ensure academic integrity.

Accessibility

The Student Accessibility Centre is Dalhousie's centre of expertise for matters related to student accessibility and accommodation.

If there are aspects of the design, instruction, and/or experiences within this course (online or in-person) that result in barriers to your inclusion please contact:

- the [Student Accessibility Centre](#) (for all courses offered by Dalhousie with the exception of Truro)
- the [Student Success Centre in Truro](#) for courses offered by the Faculty of Agriculture

Your classrooms may contain accessible furniture and equipment. It is important that these items remain in place, undisturbed, so that students who require their use will be able to fully

participate.

Diversity and Inclusion – [Culture of Respect](#)

Every person at Dalhousie has a right to be respected and safe. We believe inclusiveness is fundamental to education. We stand for equality. Dalhousie is strengthened in our diversity. We are a respectful and inclusive community. We are committed to being a place where everyone feels welcome and supported, which is why our Strategic Direction prioritizes fostering a culture of diversity and inclusiveness (Strategic Priority 5.2).

Code of Student Conduct

Everyone at Dalhousie is expected to treat others with dignity and respect. The [Code of Student Conduct](#) allows Dalhousie to take disciplinary action if students don't follow this community expectation. When appropriate, violations of the code can be resolved in a reasonable and informal manner—perhaps through a restorative justice process. If an informal resolution can't be reached, or would be inappropriate, procedures exist for formal dispute resolution.

Fair Dealing policy

The Dalhousie University [Fair Dealing Policy](#) provides guidance for the limited use of copyright protected material without the risk of infringement and without having to seek the permission of copyright owners. It is intended to provide a balance between the rights of creators and the rights of users at Dalhousie.

Student Use of Course Materials

These course materials are designed for use as part of the Course Code at Dalhousie University and are the property of the instructor unless otherwise stated. Third party copyrighted materials (such as books, journal articles, music, videos, etc.) have either been licensed for use in this course or fall under an exception or limitation in Canadian Copyright law. Copying this course material for distribution (e.g. uploading to a commercial third-party website) may lead to a violation of Copyright law.

UNIVERSITY POLICIES, GUIDELINES, AND RESOURCES FOR SUPPORT

Student health and wellness

Taking care of your health is important. As a Dalhousie student, you have access to a wide range of resources to support your health and wellbeing. Students looking to access physical or mental health & wellness services at Dalhousie can go to the Student Health & Wellness Centre in the

LeMarchant Building. The team includes: registered nurses, doctors, counsellors and a social worker. Visit dal.ca/studenthealth to learn more and book an appointment today.

Dalhousie courses are governed by the academic rules and regulations set forth in the [Academic Calendar](#) and the [Senate](#).

University Policies and Programs

- [Classroom Recording Protocol](#)
- [Dalhousie Grading Practices Policy](#)
- [Grade Appeal Process](#)
- [Sexualized Violence Policy](#)

Learning and Support Resources

- [Student Health & Wellness Centre](#)
- [Centre for Learning and Teaching \(CLT\) website](#)
- [Dalhousie Academic Support website.](#)
- [Indigenous Student Centre](#)
- [Black Student Advising Centre](#)
- [International Centre](#)
- [LGBTQ2SIA+ Collaborative](#)
- [Dalhousie Libraries](#)
- [Copyright Office](#)
- [Dalhousie Student Advocacy Service \(DSAS\)](#)
- [Dalhousie Ombudsperson](#)
- [Human Rights & Equity Services](#)
- [Writing Centre](#)
- [Study Skills/Tutoring](#)