

**PSCI 4701A and PSCI 5701A**  
**Intermediate Polometrics for Micro Data**  
**8:35 to 11:25 Wednesdays**

**Instructor:** Scott Edward Bennett  
[scott.bennett@carleton.ca](mailto:scott.bennett@carleton.ca)

**Class Times:** 8:30 to 11:30 Wednesdays starting January 13, 2021 and ending on April 14, 2021. **The course will be conducted on line, and you will receive instructions allowing you to login to course meetings.**

**Office Hours:** There are no fixed office hours, but you can communicate with the instructor by email at any time. He will usually get back to you within a day.

Read this syllabus carefully. This syllabus stipulates class and university policies. Exemptions from these policies are almost never granted.

**Note: In so far as possible, you should try to communicate with the instructor through email. There are no online office hours. There are very few matters that cannot be dealt with by email.**

Nature of Course

The purpose of this course is to provide you with an opportunity to improve your skills for analysing and collecting micro data with political science relevance. When we refer to "micro data" we are generally concerned with data on individuals or households generated through survey research techniques or observational techniques. The research designs involved may be either experimental or non-experimental. The techniques covered in the course are also relevant to macro data, and, in rare cases, a student may be permitted to work on a macro data project.

This year primary emphasis will probably be placed on analysis rather than on collection of data, but some attention will still be devoted to problems of survey data collection and measurement. If the consensus of the students in the course is a desire to expand the measurement and data set construction aspect of the course, this can be accommodated to some degree. A student may be given permission to work on their own data set if it is absolutely critical to some other aspect of their education and if they are already involved in that data set in detail. Similarly, if they are already involved in a research topic important to their overall program, they can take an alternative research

focus. Permission for work on alternative data sets should be obtained during the first two weeks of the course.

It is assumed that the student already has a knowledge of basic regression, and, with some review, we proceed to consider techniques that are beyond basic regression in complexity and power.

It is extremely important to note that the course will be conducted as a working seminar with considerable opportunity for applied exercises. Nevertheless, there is more of a lecture component to this than is the case with some seminars. Some aspects of this may have to change in light of the online nature of the course, and this is the first time it has been offered in this manner. So, be prepared for some possible adjustments.

### Main Texts

There are no main texts for the course. The material for the course is predominately imparted by the instructor through lectures and demonstrations using actual data. It is important to attend classes.

For review purposes, and depending on the background of the class, a book that may be used in a significant way is:

Bennett, Public Affairs Research Methods: A Quantitative Introduction

It is not necessary to purchase this book as there are copies in the library. Furthermore, there is a great deal of PowerPoint slide material available to the class which reproduces most of the preliminary information in the above text.

Secondary readings may also be suggested from time to time and are sometimes available on reserve. Some of the major reserve readings that are available are listed in an appendix.

**Finally, you must use SPSS for your analysis in this course. The instructor is well aware that there are other software packages that can do some of what we need to do in this course, but SPSS is the best overall choice. Fortunately, it is available free to Carleton students on a yearly basis. More will be explained about this later.**

### Grading and Preliminary Comments on Course Work

Major Seminar Paper (due April 14)	70 % of course grade
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Participation (including attendance, exercises and presentations)	30% of course grade
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More details on the major paper will be provided in class. It will be an analysis of data based on some of the techniques presented in the course. If time permits, an oral presentation on the paper will be made to the class during its last meeting on April 14, 2021. The final version of the paper is due as an attachment to an email to the instructor on April 14, 2021. The attachment must be in WORD format.

Exercises will involve using a technique and writing no more than one page about results from the technique. This will be done for some of the major techniques introduced in the course. For any given technique, these exercises must be shown to the instructor in the class after the technique is introduced. If time permits, students may be asked to orally present the results of each exercise.

Ideally, if time permits, there will be at least two major presentations, apart from any minor presentations of exercises. One of these should be during the final class when the results of the major paper are presented. The other major presentation will occur at about the sixth class when each student will be asked to briefly outline their intended major analytic paper in a presentation to the class.

Those registered in PSCI 5701 will be evaluated in essentially the same way as those registered in PSCI 4701. However, it is expected that students registered in a graduate course will pay a bit more attention to placing their work in existing literature than those registered in an undergraduate course.

**This term we are also requiring that you must attend (online) at least one of the first two meetings of the course if you wish to pass the course. This is essential for the continuity of the course under current circumstances.**

### Main Topics

**Note that the instructor considers it to be bad pedagogy and probably bad administration to assign in advance specific dates to the coverage of specific topics. In general, we hope to reach topic 4 (preliminary outlines) no later than week 7 of the course. However, this is an expectation that can be altered in light of student background, interests and progress. We will cover as many of the topics as is appropriate and possible in the order listed below.**

1. Introduction to the Course

2. Review of Basic Research Methods --- This will be a lecture review of research design, estimation, measurement, sampling, data collection and basic statistics. A review of some reserve readings such as the following may be useful:

Bennett, Public Affairs Research Methods: A Quantitative Introduction Chapters 5 to 10.

3. Linear Regression and Some Basic Extensions: Explaining Ordered Variables
4. Presentation of Research Paper Outlines Will Probably Take Place about Here
5. Logistic Regression: Specialised Prediction of Categorical Variables
6. Discriminant Analysis: Predicting Categorical Group Memberships using a Different Analytic Tradition
7. Factor and Principal Components Analysis: Finding Patterns in Sets of Variables  
(\*If it seems to suit student projects, we may cover this technique earlier.\*)
8. Cluster Analysis and Related Techniques: Finding Patterns in Sets of Cases
9. The Causal Modelling Approach: Exploring Systems of Relationships
10. Additional Techniques of Interest --- If time permits, we will consider some additional techniques of interest in a preliminary manner. However, in the past, students have usually found it beneficial to have one or more classes devoted to final problem solving at this point in the course.
11. Closing Presentations on Research Projects (If Time Permits)

Some of the above topics may require more than week of course time for proper coverage.

#### Other Issues

Without going into great detail, various other course, departmental and university rules apply to the conduct of any course. You are expected to know them. From, my point of view, the important rules are:

1. Do your work on time as described in this outline and in class.
2. Do not engage in plagiarism.
3. Do not disrupt the class. Keep in mind this may involve some considerations in an online class that are not relevant to a class meeting in physical proximity.
4. Keep an open mind with respect to value systems and approaches to inquiry.

With respect to point one above, the final copy of the course paper should be sent to the instructor as a WORD attachment to an email no later than April 14, 2021. Be sure you keep copies of your work.

### Appendix A: Some Reserve Reference Material

Causal Modeling by Herbert B. Asher.

Multiple Regression in Practice by Berry and Feldman

Discriminant Analysis by William R. Klecka

Factor Analysis: Statistical Methods and Practical Issues by Jae-on-Kim and Charles W. Mueller

Introduction to Factor Analysis: What It Is and How to Do It by Jae-on-Kim and Charles W. Mueller

Introduction to Survey Sampling by Graham Kalton

Linear Probability, Logit, and Probit Models by John H. Aldrich and Forrest D. Nelson

Using Multivariate Statistics (ideally sixth edition) by Tabachnick and Fidell

The above are only intended as references. They may provide additional technical insights, but students will get most of the information they need by attending classes and labs.

Other rules of general interest from a departmental or university perspective are contained in the material that follows. The instructor only takes responsibility for the essence of the above material.

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### Accommodations during COVID

Due to COVID, instructors will not request or require a doctor's note when students seek accommodation for missed term work or exams due to illness. Instead, students will be asked to complete the self-declaration form available here: [https://carleton.ca/registrar/wp-content/uploads/COVID-19\\_Self-declaration.pdf](https://carleton.ca/registrar/wp-content/uploads/COVID-19_Self-declaration.pdf)

## Academic Accommodations

### Pregnancy

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website: [carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf](https://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf)

### Religious obligation

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website: [carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf](https://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf)

### Students with Disabilities

If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) at 613-520-6608 or [pmc@carleton.ca](mailto:pmc@carleton.ca) for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made.

### Survivors of Sexual Violence

As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and is survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: [carleton.ca/sexual-violence-support](https://carleton.ca/sexual-violence-support)

### Student Activities

Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. <https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf>

For more information on academic accommodation, please contact the departmental administrator or visit: [students.carleton.ca/course-outline](https://students.carleton.ca/course-outline)

### Plagiarism

The University Senate defines plagiarism as “presenting, whether intentional or not, the ideas, expression of ideas or work of others as one’s own.” This can include:

- reproducing or paraphrasing portions of someone else's published or unpublished material, regardless of the source, and presenting these as one's own without proper citation or reference to the original source;
- submitting a take-home examination, essay, laboratory report or other assignment written, in whole or in part, by someone else;
- using ideas or direct, verbatim quotations, or paraphrased material, concepts, or ideas without appropriate acknowledgment in any academic assignment;
- using another's data or research findings;
- failing to acknowledge sources through the use of proper citations when using another's works and/or failing to use quotation marks;
- handing in "substantially the same piece of work for academic credit more than once without prior written permission of the course instructor in which the submission occurs.

Plagiarism is a serious offence which cannot be resolved directly with the course's instructor. The Associate Deans of the Faculty conduct a rigorous investigation, including an interview with the student, when an instructor suspects a piece of work has been plagiarized. Penalties are not trivial. They may include a mark of zero for the plagiarized work or a final grade of "F" for the course.

More information on the University's Academic Integrity Policy can be found at:

<https://carleton.ca/registrar/academic-integrity/>

#### Intellectual property

Student or professor materials created for this course (including presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the author(s). They are intended for personal use and may not be reproduced or redistributed without prior written consent of the author(s).