

PSCI 4701A and PSCI 5701A
Intermediate Polimetrics for Micro Data
8:35 to 11:25 Tuesdays

Instructor: Scott Edward Bennett
C 672 Loeb Building
sebcarleton@magma.ca
scottbennett@cunet.carleton.ca

Class Times: 8:30 to 11:30 Tuesday starting January 10, 2023 and ending on April 11, 2023.

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 in class or through electronic mail. There are no in person office hours. There are very few matters that cannot be dealt with in class or 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. 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 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.

This year we will have a greater than usual variety of student backgrounds in terms of level and field of study. This is a positive dimension of the course, but it may sometimes mean that the course has to be conducted in special ways to be responsive to that dimension.

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 11)	70 % of course grade
Participation (including attendance, exercises and presentations)	30% of course grade

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 11, 2023. The final version of the paper is due as an attachment to an email to the instructor on April 11, 2023. 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. This is usually handled in an informal way.

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 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.

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 11, 2023. 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.

Appendix

Covid-19 Pandemic Measures

It is important to remember that COVID is still present in Ottawa. The situation can change at any time and the risks of new variants and outbreaks are very real. There are [a number of actions you can take](#) to lower your risk and the risk you pose to those around you including being vaccinated, wearing a mask, staying home when you're sick, washing your hands and maintaining proper respiratory and cough etiquette.

Feeling sick? Remaining vigilant and not attending work or school when sick or with symptoms is critically important. If you feel ill or exhibit COVID-19 symptoms do not come to class or campus. If you feel ill or exhibit symptoms while on campus or in class, please leave campus immediately. In all situations, you should follow Carleton's [symptom reporting protocols](#).

Masks: Masks are no longer mandatory in university buildings and facilities. However, we continue to recommend masking when indoors, particularly if physical distancing cannot be maintained. We are aware that personal preferences regarding optional mask use will vary greatly, and we ask that we all show consideration and care for each other during this transition.

Vaccines: While proof of vaccination is no longer required to access campus or participate in in-person Carleton activities, it may become necessary for the University to bring back proof of vaccination requirements on short notice if the situation and public health advice changes. Students are strongly encouraged to get a full course of vaccination, including booster doses as soon as they are eligible and submit their booster dose information in [cuScreen](#) as soon as possible. Please note that Carleton cannot guarantee that it will be able to offer virtual or hybrid learning options for those who are unable to attend the campus.

All members of the Carleton community are required to follow requirements and guidelines regarding health and safety which may change from time to time. For the most recent information about Carleton's COVID-19 response and health and safety requirements please see the [University's COVID-19 website](#) and review the [Frequently Asked Questions \(FAQs\)](#). Should you have additional questions after reviewing, please contact covidinfo@carleton.ca.

Student Mental Health

As a university student you may experience a range of mental health challenges that significantly impact your academic success and overall well-being. If you need help, please speak to someone. There are numerous resources available both on- and off-campus to support you. Here is a list that may be helpful:

Emergency Resources (on and off campus): <https://carleton.ca/health/emergencies-and-crisis/emergency-numbers/>

- **Carleton Resources:**
 - Mental Health and Wellbeing: <https://carleton.ca/wellness/>
 - Health & Counselling Services: <https://carleton.ca/health/>
 - Paul Menton Centre: <https://carleton.ca/pmc/>
 - Academic Advising Centre (AAC): <https://carleton.ca/academicadvising/>
 - Centre for Student Academic Support (CSAS): <https://carleton.ca/csas/>
 - Equity & Inclusivity Communities: <https://carleton.ca/equity/>
- **Off Campus Resources:**
 - Distress Centre of Ottawa and Region: (613) 238-3311 or TEXT: 343-306-5550, <https://www.dcottawa.on.ca/>
 - Mental Health Crisis Service: (613) 722-6914, 1-866-996-0991, <http://www.crisisline.ca/>
 - Empower Me: 1-844-741-6389, <https://students.carleton.ca/services/empower-me-counselling-services/>
 - Good2Talk: 1-866-925-5454, <https://good2talk.ca/>
 - The Walk-In Counselling Clinic: <https://walkincounselling.com>

Requests for Academic Accommodation

You may need special arrangements to meet your academic obligations during the term. For an accommodation request, the processes are as follows:

Pregnancy accommodation: 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 accommodation regarding a formally-scheduled final exam, you must complete the Pregnancy Accommodation Form ([click here](#)).

Religious accommodation: 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 [click here](#).

Accommodations for 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 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, reach out

to your instructor as soon as possible to ensure accommodation arrangements are made. For more details, [click here](#).

Accommodation for 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 engage in student activities 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.

Sexual Violence Policy

As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated. 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.

Plagiarism

Carleton's [Academic Integrity Policy](#) defines plagiarism as "presenting, whether intentional or not, the ideas, expression of ideas or work of others as one's own." This includes 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. Examples of sources from which the ideas, expressions of ideas or works of others may be drawn from include, but are not limited to: books, articles, papers, websites, literary compositions and phrases, performance compositions, chemical compounds, art works, laboratory reports, research results, calculations and the results of calculations, diagrams, constructions, computer reports, computer code/software, material on the internet and/or conversations.

Examples of plagiarism include, but are not limited to:

- any submission prepared in whole or in part, by someone else;
- using ideas or direct, verbatim quotations, paraphrased material, algorithms, formulae, scientific or mathematical concepts, or ideas without appropriate acknowledgment in any academic assignment;
- using another's data or research findings without appropriate acknowledgement;

- submitting a computer program developed in whole or in part by someone else, with or without modifications, as one's own; and
- failing to acknowledge sources through the use of proper citations when using another's work and/or failing to use quotations marks.

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).

Submission and Return of Term Work

Papers must be submitted directly to the instructor according to the instructions in the course outline. The departmental office will not accept assignments submitted in hard copy.

Grading

Standing in a course is determined by the course instructor, subject to the approval of the faculty Dean. Final standing in courses will be shown by alphabetical grades. The system of grades used, with corresponding grade points is:

Percentage	Letter grade	12-point scale	Percentage	Letter grade	12-point scale
90-100	A+	12	67-69	C+	6
85-89	A	11	63-66	C	5
80-84	A-	10	60-62	C-	4
77-79	B+	9	57-59	D+	3
73-76	B	8	53-56	D	2
70-72	B-	7	50-52	D-	1

Standing in a course is determined by the course instructor subject to the approval of the Faculty Dean. This means that grades submitted by an instructor may be subject to revision. No grades are final until they have been approved by the Dean.

Carleton E-mail Accounts

All email communication to students from the Department of Political Science will be via official Carleton University e-mail accounts and/or Brightspace. As important course and university information is distributed this way, it is the student's responsibility to monitor their Carleton University email accounts and Brightspace.

Carleton Political Science Society

The Carleton Political Science Society (CPSS) has made its mission to provide a social environment for politically inclined students and faculty. By hosting social events, including Model Parliament, debates, professional development sessions and more, CPSS aims to involve all political science students at Carleton University. Our mandate is to arrange social and academic activities in order to instill a sense of belonging within the Department and the larger University community. Members can benefit through our networking opportunities, academic engagement initiatives and numerous events which aim to complement both academic and social life at Carleton University. To find out more, visit us on Facebook <https://www.facebook.com/CarletonPoliticalScienceSociety/>.

Official Course Outline

The course outline posted to the Political Science website is the official course outline.