

AP/PPAS 3300 6.00 (A)  
(Crosslisted as AP/POLS 3300 6.0 and AP/SOCI 3030 6.0)  
Statistics for Social Sciences  
2021-2022

Professor Daniel Cohn, Ph.D.  
The School of Public Policy and Administration

**Attention All Potential Students: This Class Will Be Conducted Remotely.**

Instructor	Telephone	Email	WWW	One-on-One Help
Daniel Cohn	(416)736-2100 x77276 This is my campus office Voice Mail, I check it once a day Monday to Friday	<a href="mailto:dcohn@yorku.ca">dcohn@yorku.ca</a>	<a href="http://dcohn.info.yorku.ca">dcohn.info.yorku.ca</a>	By Appointment via the Telephone or Zoom during my office hours: Thurs 10:30 – 12:30
<b>To make an appointment for the Thursday Telephone Office Hours (One-on-One Help):</b> Email me a request including your name, your student number, a brief explanation (e.g. “problem accessing readings for week 2”, “I want to discuss my grade on assignment 1”, “I need help with my essay”, etc.). Also, please include a backup telephone number I can call you at in case Zoom crashes. I will then send you a zoom link for our meeting. If you are unable to speak during my office hours and need to speak at a different time, I will do his best to accommodate you, but cannot promise to do so.				

Teaching Components	Time	Method of Delivery
Lectures	Pre-recorded and available one week in advance of each Topic on the Weekly Schedule and the Optional Drop-in Help Sessions	Available via a link placed on the course E-Class site
Optional Drop-in Help Sessions	Monday 19:00 – 20:00 and 20:30 to 21:30	Live via Zoom

Several platforms will be used in this course (e.g., E-Class, Zoom, etc.) through which students will interact with the course materials, the professor, as well as with one another. Please review this syllabus to determine how the class meets (in whole or in part), and how office hours and presentations will be conducted.

**Rather than the traditional lecture format, this course employs pre-recorded lectures. These will be available through the course E-Class site one week in advance of each topic’s date on the class schedule. I will then use the scheduled course time on Monday evenings to conduct live online drop-in sessions. These sessions (19:00-20:00 and 20:30-21:30) are optional. You can drop-in every week, only when you have something you wish to discuss or ask about, or never at all. You are also under no obligation to stay online for an entire block you log in for. As noted above, one-on-one help will be available during office hours. However, given the current circumstances, you will have to book an appointment via email so that I can arrange a Zoom chat or phone call if Zoom crashes.**

Students should note the following:

- Zoom is hosted on servers in the U.S. This includes recordings done through Zoom.
- If you have privacy concerns about your data, provide only your first name or a nickname when you join a session.
- The system is configured in a way that all participants are automatically notified when a session is being recorded. In other words, a session cannot be recorded without you knowing about it.

If you enroll in this class, you are agreeing to participate in it remotely, including:

- Watching each week's pre-recorded lecture available through the E-Class. course site. These lectures will be made available to you one week in advance of each topic's date on the course outline
- Participating (if you wish to and when you wish to) in optional live online question and answer sessions led by the instructor, also via Zoom.
- Submitting all assignments electronically

As a result, participation in this class requires students to have access to a decent computer or tablet with broadband internet connection, equipped with a microphone and a web-camera, both on a regular basis and specifically at the scheduled weekly time of the drop-in sessions. Further, beyond the various York University policies and regulations that already govern your conduct in this class and while you complete your assignments, you will also be required to agree to Zoom's own user agreement <https://zoom.us/terms> .

The Faculty of Liberal Arts and Professional Studies has prepared the following document: [“Student Rights and Responsibilities”](#) to help you better understand these topics.

The University has prepared the following document: [“Important Course Information”](#), which you should also be familiar with.

#### Accessibility:

If you require accommodation due to a disability, please advise the instructor as soon as possible or arrange to have the appropriate office on campus send him an “accommodation letter” or “notice of needed accommodation form”, etc. The instructor is happy to make adjustments needed so that you can achieve your full potential as a student in the course.

#### Summary Description:

This course provides a basic understanding of the statistical reasoning and fundamental statistical techniques frequently used to analyze social data. It introduces students to the uses of computers and statistics in the social sciences. It helps develop necessary critical skills to evaluate empirical research. Please Note: There are many courses that are “course credit exclusions” for this class. In other words, classes that if you have taken for credit, bar you from earning credit for this on and vice-versa. A complete list of these can be found here:

<https://w2prod.sis.yorku.ca/Apps/WebObjects/cdm.woa/wa/crsq?fa=AP&sj=PPAS&cn=3300&cr=6.00&ay=2021&ss=FW>

The Learning Objectives of this Course Are:

In ordinary language, the aim is to enable students who successfully complete this course to be able to learn the fundamentals of quantitative research so that they will:

- 1.) Be knowledgeable about research ethics and be aware of which projects require ethical review
- 2.) Be familiar with -- and able to conduct a basic statistical analysis, generate simple tables and graphs using -- the SPSS Software Program
- 3.) Understand the different strengths and weaknesses of both quantitative and qualitative approaches to research, and are able to select an approach most appropriate to the problem or question being investigated.
- 4.) Be able to design and conduct a simple research project using statistical methods
- 5.) Know enough about the statistical approach to social research, that they will be able to learn more advanced skills via independent study with the advice of a faculty member or other experienced researcher or by taking more advanced classes
- 6.) Be an “educated consumer” of research published in social science journals and books (be able to understand what the authors did and claim to have found out, evaluate their methods and work, and be able to employ it as evidence in the student’s own essays and reports).

Assignments, Grading Scheme, Due Dates:

Assignment	Date	Grades
Research Ethics & Theory Assignment	October 18	10
Research Design	January 10	10
December Take-Home Exam	Posted Dec. 13 – Due Dec. 20	20
Descriptive Statistics	February 28	15
Inferential Statistics	April 4	15
Final Take-Home Exam	Posted April 12 – Due April 19	30
Total		100

Grading Policies:

All students in the course are strongly encouraged to familiarize themselves with the seven modules of [The Academic Integrity Tutorial](#). Please note: It is your responsibility to be aware of [The University’s Academic Honesty Policy](#), as well as its other policies governing student conduct and to ensure that your work is done in conformity with the best standards of academic behaviour. I am required by the regulations of the University to report ALL suspected violations of the Academic Honesty Policy. The professor will be happy to answer any questions you might have about academic integrity and to assist you, but it is up to you to make sure you do not cheat. Sounds silly. Yes it is. However, over the years we have found that most violations of these policies are simply accidental and not deliberate. By taking the time to

review the modules of the tutorial, you will be taking a big step towards ensuring you do not inadvertently get yourself into trouble.

All assignment and take home exams are to be submitted electronically. Further details will be provided as to how this will be done at the start of the term. A note about “take-home exams”. A take-home exam is a hybrid of a traditional assignment with the short time limits of an exam. In the case of this class, the December and Final take-home exams will be posted on the course E-Class site on the dates noted above and you will then have one week to complete the exam and upload it back to the E-Class site. You will get further instructions and advice on how to successfully complete all of the written assignments, including how to write an award-winning take-home exams, during the course.

Late assignments will be assessed a penalty of 1/10th the marks available per day (weekends count as one day). This penalty will be waived if you have a compelling reason for being late, such as a serious illness or the need to care for a sick dependent. Requests for extensions or for the waiving of late penalties must be appropriately documented with medical notes, etc. Please let me know as soon as possible if you cannot make a deadline and are going to be late.

The class consists of a series of weekly, pre-recorded lectures. Ideally, you will have done your assigned weekly readings before watching the lectures and to have done both, before the optional drop-in session for the topic on Monday evening. That way, if you have any questions or wish to discuss something, you can log on for the weekly online drop-in sessions. As noted previously, these sessions will be Monday 19:00-20:00 and 20:30-21:30 and are optional. You may participate every week if you like, only when you have a problem or question you wish to discuss in a group setting, or not at all, if that is your preference.

**YOU MUST COMPLETE ALL ASSIGNMENTS AND EXAMS TO RECEIVE A GRADE FOR THIS COURSE. STUDENTS WHO HAVE A LEGITIMATE REASON FOR HAVING WORK OUTSTANDING AT THE END OF THE COURSE WILL BE GRANTED EXTENSIONS TO THE YEAR END DEADLINES AND, IF NEED BE, DEFERRED STANDING TO THE LIMITS ALLOWED BY THE UNIVERSITY'S REGULATIONS. HOWEVER, THE REQUIREMENT TO COMPLETE ALL WORK WILL ONLY BE WAIVED IN THE MOST EXTREME AND DIRE CIRCUMSTANCES.**

Required Textbooks:

Research methods books tend to be even more expensive than other textbooks. To save money, wherever possible I have asked the bookstore to order electronic copies of the required books we will be using. In most cases you can save even more money by “renting” access to the books rather than buying them forever.

- Berdahl, Loleen, and Jason Roy. 2021. *Explorations: Conducting Empirical Research in Canadian Political Science, fourth edition*. Toronto: Oxford University Press. Note: We will be using this book throughout the first term and also after the December break, so you will need to rent it for the entire year.

- Marchant-Shapiro, Theresa. 2015. *Statistics for Political Analysis*. Los Angeles: Sage/CQ Press. Note: We will not be using this book until January so you can save money by only renting it for the second term.
- Other readings and data sources will be made available electronically via the York University Library, the internet, or the class E-Class Website.

A word or two about SPSS. As part of this course, you will be learning the basic features of a software program called SPSS. SPSS is a program that is widely used to conduct statistical research in academic, business and government settings. As a York University student, you have access to a cloud based version of the program free of charge through “my apps” ( [Applications Available on MyApps | University Information Technology \(UIT\) \(yorku.ca\)](#) ) or you can pay an annual license fee which runs from September 1 – August 31 and download a copy to your own computer and run it locally ( [Discounted Software | University Information Technology \(UIT\) \(yorku.ca\)](#) ). If you do choose to use the “My Apps” cloud based service, the first time you log onto the cloud server you will be asked to install a small program on your computer called “Apps Now Cloud Paging Player”. Next time, you will just have to open the “Cloud Paging Player” and click on SPSS to use it (if you have not logged on to Passport York, you might be asked to).

Which option is best for you is something I cannot really answer. If you have a good high-speed internet connection you don’t share with many people and are willing to accept that every now and then stuff happens (for example the University I/T folks like to do maintenance on long weekends so the program might not be available for a few hours here or there), then go ahead and use the cloud based system. If you have a sibling who is online when you are also doing your homework and your parents watching Netflix too..., or you get really frustrated when you cannot access things when you want them every single time, maybe you need to invest in an annual license.

### Weekly Schedule of Topics:

#### *Part 1: Thinking about Research and Research Design*

September 13: Why are we here: Using quantitative evidence to describe, predict and explain

- No Required Reading

September 20: Thinking about public affairs and research on politics, the state and public policy

- Berdahl and Roy Chapters 1 and 2

September 27: Research ethics

- Berdahl and Roy Chapter 3
- Tri-Council Panel on Research Ethics. 2018. Tri-Council Policy Statement 2: Ethical Conduct for Research Involving Humans, Introduction and Chapter 1.  
[https://ethics.gc.ca/eng/policy-politique\\_tcps2-eptc2\\_2018.html](https://ethics.gc.ca/eng/policy-politique_tcps2-eptc2_2018.html)
- York University Policy on Research Involving Human Participants  
<https://www.yorku.ca/secretariat/policies/policies/ethics-review-process-for-research-involving-human-participants-policy/>

October 4: Moving from a research idea to a research project: Theory, concepts and measures (or observations)

- Berdahl and Roy Chapter 4

October 11: FALL READING BREAK NO CLASS

### *Part II: Research Design*

October 18: Understanding where data comes from: Populations, sampling and probability  
(Assignment 1 Due)

- Berdahl and Roy Chapter 5

October 25: Researching with documents and texts (quantitative vs. qualitative strategies)

- Berdahl and Roy Chapter 6

November 1: Human participant research: Interviews, focus groups and observational research (Small N and/or qualitative)

- Berdahl and Roy Chapter 7

November 8: Human participant research: Surveys and secondary analysis (Large N and/or quantitative)

- Berdahl and Roy Chapter 8

November 15: Human participant research: Experiments AND Getting Started with SPSS: Installing the program or gaining access to the cloud-based version

- Berdahl and Roy Chapter 9

November 22: The Small N Comparative Method, and Comparative Politics, Public Policy and Public Administration AND Getting Started with SPSS: Inputting and defining your variables

- Berdahl and Roy Chapter 10

November 29: Analyzing qualitative data AND Getting Started with SPSS: Downloading Datasets for Secondary Analysis from ODESI

- Berdahl and Roy Chapter 11

December 6: Review of what we have done so far and a brief conversation about comparisons across space or individuals (cross-sectional), time (chronological) or both (panel data and pooled-time data).

- No Readings

December 13: Fall Term Take-Home Exam Posted – Due December 20

=====WINTER BREAK=====

*Part 3: Getting Started on Quantitative Research and Descriptive Statistics*

January 10: Recap from last term some key concepts, Theory, Concepts and Measurement  
(Assignment 2 Due)

- Marchant-Shapiro, Chapters 1 and 2
- Supplemental Reading: Berdahl and Roy Chapter 4 relevant sections

January 17: Measures of central tendency

- Marchant-Shapiro Chapter 3
- Supplemental Reading: Berdahl and Roy Chapter 12 relevant portions of following sections:
  - Univariate Statistics: Distribution, Central Tendency, and Dispersion
  - Measures of Central Tendency and Dispersion for Nominal Variables: Mode and the Variation Ratio
  - Measures of Central Tendency and Dispersion for Ordinal Variables: Median and Range
  - Measures of Central Tendency and Dispersion for Interval/Ratio Variables: Mean and the Standard Deviation

January 24: Measures of dispersion

- Marchant-Shapiro Chapter 4
- Supplemental Reading: Berdahl and Roy Chapter 12 relevant portions of following sections:
  - Univariate Statistics: Distribution, Central Tendency, and Dispersion
  - Measures of Central Tendency and Dispersion for Nominal Variables: Mode and the Variation Ratio
  - Measures of Central Tendency and Dispersion for Ordinal Variables: Median and Range
  - Measures of Central Tendency and Dispersion for Interval/Ratio Variables: Mean and the Standard Deviation

January 31: Describing your data with graphs: The “art” of SPSS

- No Readings

February 7: Probability and Normality

- Marchant-Shapiro Chapter 5
- Supplemental Reading: Berdahl and Roy Chapter 13 relevant sections of chapter:
  - Normal Curve,
  - Central Limit Theorem
  - and Statistical Significance

February 14: Comparing our Sample Mean or Proportion to a Population Mean or Proportion, Margin of Error and Confidence Level (the Confidence Interval) for the Mean Scores in a Sample

- Marchant-Shapiro Chapter 6

February 21: WINTER READING BREAK – NO CLASS

*Part 4: Inferential Statistics*

February 28: Hypothesis Testing about Means with ANOVA (Assignment 3 Due)

- Marchant-Shapiro Chapter 7

March 7: Describing Relationships Graphically X-Y Graphs and Contingency Tables

- Marchant-Shapiro Chapter 8

March 14: What you see vs. what you expect (Chi sq) and Measures of Association

- Marchant-Shapiro Chapters 9 - 10

March 21: Controlling for a third variable

- Marchant-Shapiro 11

March 28: Bivariate ordinary least square (OLS) regression

- Marchant-Shapiro 12

April 4: Multiple OLS regression and some brief remarks about Non-OLS regression models (Assignment 4 Due)

- Marchant-Shapiro 13

Tuesday April 12: Final Take-Home Exam Posted – Due Tuesday April 19\*

\*NOTE: Monday April 11 is the official study day at the end of the winter term. Professors are not supposed to assign any work for that one day so you have a chance to take a quick breath before exams start. As a result, I could not assign the take-home exam to start until Tuesday April 12.