QUANTITATIVE POLITICAL ANALYSIS
POLI 3P91

Spring 2020

Department of Political Science
Brock University

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Asynchronous Lessons:
See Lessons in course Sakai site https://lms.brocku.ca
Synchronous Online Labs:
T and W: 1030-1130
Instruction will be in MS Teams at https://teams.microsoft.com
SPSS is available through Brock's virtual computer labs at https://virtuallabs.brocku.ca/
Special Webinar:
Tuesday, July 7 at 9am

COURSE DESCRIPTION

This course provides students with an intermediate level of proficiency in the statistical analysis of survey data on political behavior, attitudes, opinions and beliefs, as well as an introduction to aggregate data analysis and mapping.

LEARNING OBJECTIVES/OUTCOMES

This course has two overarching objectives: to strengthen your numerical literacy, research and reporting skills, and your ability to critically evaluate whether quantitative analytical methods foster a better understanding of political and social phenomena. Students will learn various methods of descriptive and inferential statistical analysis. Using the SPSS software package, you will learn how to create a data spreadsheet, generate statistics from survey data, test hypotheses, and clearly communicate your findings. You will also be introduced to data mapping and analysis techniques that allow you to view trends and patterns across geographic areas.

REQUIRED COURSE TEXT, READINGS AND MATERIALS

Agresti, Alan. 2018. *Statistical Methods for the Social Sciences*, 5th edition. Boston, US: Pearson Education Inc. Digital text available for purchase through the Campus Book Store.

Additional required readings as indicated in the schedule with an asterisk*. These readings have been uploaded to the Resources folder on SAKAI.

A simple, inexpensive calculator is necessary for this course. The calculator on your phone or laptop will be sufficient.

SAKAI

The syllabus, assignments and class announcements and other information will be available on SAKAI at: https://lms.brocku.ca/portal/site/afa3b3db-3a9e-4e9d-a4be-74fccfda38ed

Date for Withdrawal Without Academic Penalty: June 29, 2020. Students will have received notification of 15% of their course grade one week prior to the date for withdrawal without academic penalty.

COURSE REQUIREMENTS

Lab Assignment 1	(June 15, 9am)	15%
Lab Assignment 2	(June 22, 9am)	15%
Lab Assignment 3	(June 29, 9am)	25%
Lab Assignment 4	(July 8, 9am)	25%
Lab Assignment 5	(July 17, 9am)	20%

LESSONS

Pre-recorded lessons which explain the concepts that will be applied during the synchronous online labs, have been prepared and can be accessed in Lessons on SAKAI. A list of the lessons is available on page 4 of this syllabus. Students are expected to listen to the pre-recorded lesson before every lab. Students who do not follow the lessons will find it very difficult to understand the content that is being delivered in the labs. Just as class attendance is expected when lectures are delivered in person, the same applies to preparing for success in an online course. Students who have questions about the lessons and readings should raise them with the instructor or TA, before or during the labs.

REQUIRED READINGS

In order to enhance your academic performance in this course, it is essential that you complete each week's assigned readings prior to the labs each week. The required digital textbook is available for purchase through the Campus Bookstore. Other required readings are available in the Resources folder on SAKAI.

ACCESSING THE VIRTUAL LAB TO LAUNCH SPSS

Brock University's Virtual Labs is an online platform that provides users with access to the SPSS 26.0 software and datasets that you will be using during the Tuesday and Wednesday labs, as well as to complete your assignments outside of the regularly scheduled labs. For most labs, you will need to connect to the virtual lab dashboard and launch SPSS by following the instructions in the Remote Access-Using Virtual Labs guide. This guide is available in Resources on SAKAI and you are welcome to confirm your PC, Mac or newer Chromebook can access the labs software at any time. As previously announced, in order to access the virtual

lab, you will need to obtain MFA credentials before May 27, 2020. The instructions for obtaining MFA credentials and for accessing the virtual lab are available in the Resources in SAKAI.

Consistent lab attendance is critical to your success in this course as the computer skills that are required to complete the lab assignments will be taught during these sessions. This means that you are expected to log into the virtual lab and launch SPSS **before** the beginning of each lab at 10:30am on Tuesdays and Wednesdays. At 10:30am, the TA will record the names of all participants. Students who do not participate in two or more labs during the term without an acceptable explanation for their absence (i.e. medical reasons or personal emergencies) will not receive assistance from the instructor or TA.

JOINING THE INSTRUCTOR-LED LAB

Once students have connected to the virtual lab and have launched SPSS, they can join the instructor-led synchronous lab through the MS TEAMS desktop or mobile apps or website. During the Tuesday and Wednesday labs, the instructor will deliver instructions on how to use SPSS to analyze survey-based statistics. Your TA will be monitoring the session for student questions that may arise. Once the instructor has finished the talk, students will be asked to work on the exercises using the software and data available through the virtual lab. After a pause, we will then reconvene to discuss the results and address student questions.

SPECIAL WEBINAR PRESENTATION AND ArcGISOnline

On Tuesday, July 7 at 9 am, Sharon Janzen, Map Library Associate, Geospatial Data Coordinator, will be delivering a special webinar presentation on how to analyze aggregate data on COVID-19 cases and fatality rates across different regions of Ontario, using ArcGISonline software (AGOL). Please note today's early start in your calendar. Attendance is critical, as the final lab assignment will be based on the information presented in this webinar. In addition to the live webinar, written instructions for using the software to produce the maps and data you will need will be provided in Lessons on SAKAI.

Every registered Brock student will have access to AGOL via their Brock credentials. Sharon has prepared a helpful youtube video showing how you can sign in using your Brock credentials: **https://youtu.be/GqH4UHTUf2s** Please see the step-by-step instructions up to 1:20 of the video.

LAB ASSIGNMENTS AND POLICY REGARDING ASSIGNMENT SUBMISSION

All lab assignments are based on the material presented in the lessons, readings, labs and special webinar. Lab time will be devoted to starting work on the lab assignments, but students should not expect to complete these assignments during lab time. You must plan on completing your assignments outside of the scheduled labs. Electronic copies of all assignments will be available in the Assignment folder on SAKAI.

All lab assignments must be submitted to Assignments on SAKAI by the due date. Assignments are considered received when an electronic copy has been uploaded to Assignments. Assignments will be assessed a penalty of five per cent for each day late. Lab assignments will not be accepted after Friday 4pm of the week the assignment is due. Extensions of due dates are granted only in circumstances that are beyond the student's control, such as health issues or personal emergencies.

LESSON DATES:	LESSON TOPICS	READINGS	LAB DATES AND EXERCISES	ASSIGNMENTS
June 9, Lesson 1 June 10, Lesson 2	Introduction to Quantitative Analysis Measuring Variables and Descriptive Statistics	Chapters 1,2,3 (pp 29-46)	June 9: Introduction to SPSS, Surveys and Codebooks June 10: Measures of Central Tendency and Dispersion	#1: Due June 15 at 9 am
June 16 Lesson 3 June 17, Lesson 4	The Normal Probability Distribution Statistical Inference: Estimation	-Chapter 4 -Chapter 5 (p. 103-114)	June 16: Z scores (calculators required) June 17: Confidence Intervals and Confidence Levels (calculators required)	#2: Due June 22 at 9am
June 23, Lesson 5 June 24, Lesson 6	Statistical Inference: Hypothesis Testing Hypothesis Testing	-Chapter 6 (pp. 139-142, pp. 155-158) -Chapter 8 (pp. 215-225) -Chapter 7 (pp. 179-193) -Chapter 12 (pp. 358-362)	June 23: Chi Square Significance Test June 24: T-test and ANOVA Significance Tests	#3 Due June 29 at 9am
June 30, Lesson 7 July 3, Lesson 8	Bivariate Analysis: categorical variables Multivariate Analysis	-Chapter 8 (pp. 227-239) -Dee Britton, SPSS etutor: Measures of Association and Correlationhttps://subjectguides.esc.edu/c.php?g=659059&p=4626955 -Chapter 10	June 30: Measures of association for categorical variables July 3: Controlling for third variables	#4 Due July 8 at 9am
July 7 9am, Lesson 9	Aggregate Data Mapping Webinar led by Sharon Janzen	-Robin Jacob, "Using Aggregate Administrative Data in Social Policy Research"* -POLI 3P91 AGOL Tutorial (see Lessons Folder)	**July 7: Live webinar beginning at 9am**	
July 8, Lesson 10	Bivariate Analysis: interval variables	Chapter 3 (pp. 52-54)	July 8: Correlation Analysis of COVID-19 public health data and census data	#5 Due July 17 at 9am

Academic Policies

Academic Integrity:

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Polices" entry in the Undergraduate Calendar, available at http://brocku.ca/webcal to view a fuller description of prohibited actions, and the procedures and penalties.

Intellectual Property Notice:

All slides, presentations, handouts, tests, exams, and other course materials created by the instructor in this course are the intellectual property of the instructor. A student who publicly posts or sells an instructor's work, without the instructor's express consent, may be charged with misconduct under Brock's Academic Integrity Policy and/or Code of Conduct, and may also face adverse legal consequences for infringement of intellectual property rights.

Academic Accommodation:

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the university community with disabilities. If you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact Services for Students with Disabilities in the Student Development Centre (4th floor Schmon Tower, 905-688-5550, ext. 3240). You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assessments.

Academic Accommodation due to Religious Obligations:

Brock University acknowledges the pluralistic nature of the undergraduate and graduate communities such that accommodations will be made for students who, by reason of religious obligation, must miss an examination, test, assignment deadline, laboratory or other compulsory academic event. Students requesting academic accommodation on the basis of religious obligation should make a formal, written request to their instructor(s) for alternative dates and/or means of satisfying requirements.

Medical Exemption Policy:

The University requires that a student be medically examined in Health Services, or by an off-campus physician prior to an absence due to medical reasons from an exam, lab, test, quiz, seminar, assignment, etc. The Medical Certificate can be found at: http://www.brocku.ca/health-services/policies/exemption