

**PLS 211: Quantitative Methods  
Fall 2020—Online**

**Course Instructor:**

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Political Science and International Relations

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Office Hours: TBD

**Course Objectives:**

This course will introduce you to the basics of quantitative methodology. This course will be taught asynchronous and will require you to engage with the course within your own limited timeframe. Every week I will post the schedule, reminders, and suggested activities for you to keep up with the course but only require that you meet the due dates of the syllabus. By the end of this term you will have the tools you need to read, assess, and perform empirical research in political science and the social sciences more generally. The class will focus on (but is not limited to) causality, data measurement, quantitative research design, probability, and linear regression. The goal of this course is to familiarize yourself with the methods and techniques that will help you conduct quantitative research, and to understand the basic logic and issues you may encounter. As part of this course, you will be introduced to the statistical package R and Rstudio (link to download in Moodle), and will be asked to perform assignments using this program to enhance your ability to conduct research.

**Learning Objectives:**

- understand the importance of theory and the basic logic of quantitative political science research;
- have thought carefully about issues of measurement and causality;
- be familiar with basic descriptive and inferential statistics;
- acquire the basic elementary skills in quantitative methods necessary for you to test hypotheses;
- to be able to produce, organize and interpret data using RStudio;
- have the ability to evaluate quantitative works in political science.

**I reserve the right to change this syllabus, including the course schedule, readings, and due dates. All changes will be announced in class and via Moodle.**

**Course Text:**

Kellstedt, Paul M., and Guy D. Whitten. 2018. *The Fundamentals of Political Science Research* (3<sup>rd</sup> edition). Cambridge University Press.

If there are additional required reading materials (e.g., book chapters, research articles), then I will make available via the course website on Moodle.

## Course Requirements

1. 30% EXAMS (2 @ 15% each )
  - a. two noncumulative, exams administered on Moodle. You will take these exams at your leisure during the appointed times during the term, you must the Professor ([Jessica.neafie@nu.edu.kz](mailto:Jessica.neafie@nu.edu.kz)) to show your work to get full credit on the assignments, additional information and the format of the exam will be described on Moodle. The exams will assess your knowledge of material contained within the assigned readings, from lecture, and from our course discussions.
2. 10% QUANTITATIVE RESEARCH PAPER DISCUSSION
  - a. This will be a short (500-750 word) essay in which you assess a peer reviewed, published journal article. This will be placed in a discussion in Moodle for other students to read, and introduce others to different quantitative research projects. Please see Moodle for additional instructions.
3. 30% FINAL PROJECT ( 3 parts: 5%, 10%, 15%)
  - a. Research Question/Idea (5%): you will submit a short (<250 words) research question, that explains the causal relationships, micro foundations and assumptions of your research question.
  - b. Research Design/Outline (10%): you will submit an outline of your research project (250-500 words) that builds on your initial ideas and also includes how you have conceptualized and operationalized your variables and the data set you will use.
  - c. Final Research Project (15%): Final project that utilizes R to answer the research question that you have chosen.
  - d. EXTRA CREDIT: Research Presentations, extra credit can be awarded if you present your research project during the week of 23-Nov. You may record yourself and then upload to a discussion section on week of 23-Nov for other students. *Please notify me if you are interested in presenting on 23-Oct when you turn in your outline.*
4. 30% Homework
  - a. To be assigned regularly throughout the term, your homework will be graded for completion and you the answers will be given for you to check yourself. You can attend regular office hours if you have questions. Every assignment will receive a 5, if it is turned in on time and complete, 4-1, if it is late or incomplete, or a 0 if the assignment is not turned in. *You may choose to drop 1 homework assignment during the term with no penalty or do all 7 an receive an opportunity for extra credit.*

### Evaluation and Grading

MIDTERM EXAM	15%
FINAL EXAM	15%
QUANTITATIVE PAPER ANALYSIS	10%
FINAL PROJECT RESEARCH QUESTION	5%
FINAL PROJECT OUTLINE	10%
FINAL PROJECT	15%
HOMEWORK	30%
<b>TOTAL</b>	<b>100%</b>

### Grading Scale:

<u>Points</u>	<u>Grade</u>	<u>Points</u>	<u>Grade</u>	<u>Points</u>	<u>Grade</u>
100.0 – 95.0 =	A	79.9 – 75.0 =	B-	59.9 – 55.0 =	D+
94.9 – 90.0 =	A-	74.9 – 70.0 =	C+	54.9 – 50.0 =	D
89.9 – 85.0 =	B+	69.9 – 65.0 =	C	49.9 – 0 =	F
84.9 – 80.0 =	B	64.9 – 60.0 =	C-		

### Course Schedule:

Date	Schedule	Assignments Due Dates	Homework Due Dates
17-Aug	<b>Module 1:</b> Chp. 1-4		
24-Aug			
31-Aug			Homework 1: 31-Aug
7-Sep	<b>Module 2:</b> Chp. 5-7	Final Project Idea: 11-Sept	
14-Sep			Homework 2: 14-Sept
21-Sep		Quant Paper: 25-Sept	
28-Sep	<b>Midterm</b>		Homework 3: R Assignment 28- Sept
5-Oct	<b>Fall Break</b>		
12-Oct	<b>Module 3:</b> Chp. 8-10		Homework 4: Respond to Quant Papers 12-Oct
19-Oct			
26-Oct		Final Project Outline: 31-Oct.	Homework 5: 26-Oct
2-Nov	<b>Module 4:</b> Chp. 11-12		
9-Nov			Homework 6: 9-Nov
16-Nov			
23-Nov	<b>Review</b>	Final Project: Nov 27; Extra Credit Presentation: Nov 16	Homework 7: 23-Nov
30-Nov	<b>Final</b>		

## Modules

	Module 1	Module 2	Module 3	Module 4
<b>Chapters</b>	Chp. 1-4	Chp. 5-7	Chp. 8-10	Chp. 11-12
<b>Themes</b>	Theory, Causality, Hypotheses, and Research Design	Measurement, Reliability and Validity, Population and Samples; Data and Surveys	Hypothesis testing, Uncertainty, confidence intervals, and OLS	Advanced Multiple Regression and Time-Series Data
<b>Math</b>	Operators, Sets, Algebra Review, Utility,	Descriptive Statistics, Scalars and Vectors, Probability, Distributions	Bivariate Hypothesis Testing, Differentiation, Matrices, linear regression,	Logit Models, Time-Series Notation, Interaction terms, Panel Data

### Course Policies and Procedures:

**Make-up Test Procedures** - No make-up examinations will be given unless arranged for in advance. It is the student's responsibility to notify me before the examination is given if they are unable to take the exam and provide an acceptable reason for the absence. Failure to follow this procedure will result in an automatic one-letter grade reduction for the test, and an additional one-letter grade per day missed.

**Late Assignments** - All assignments are due by midnight on the dates listed in the Course Schedule. Failure to turn in the assignment on time, or to provide prior notification (with acceptable excuse), will result in a 3 point per day grade reduction. Late assignments will be accepted until the Friday, November 28, 2020.

**Grade Appeals or Challenges**: I am not infallible and may make grading errors. You may then email me to make an appointment to discuss the problem. If you believe there is a miscalculation in your grade feel free to contact me as soon as possible.

If you have a question or concern regarding your performance on an assignment or an exam, you must wait 48 hours after the exam or assignment has been handed back to the class to contact me. You should also present an email statement that concisely expresses a substantive and legitimate reason for the request. "Substantive and legitimate" reasons include a grade miscalculation or a misunderstanding between the instructor and student, specifically in terms

of the content of the student's work. Your appeal will be rejected if it does not satisfy these conditions. You have two weeks to appeal the assignment once the work is handed back to the entire class, and no grade challenges will be entertained afterward. Please also note that if you appeal a grade on an assignment and I decide to reexamine the assignment, the grade may go up or down. It will be treated as a new grade on the assignment, and all aspects of the assignment are open to reexamination.

**Communication with the Instructor:** If you have any suggestions, comments, and questions about the course, political science, or graduate school, feel free to email me to set up an appointment to chat. Please allow 24 hours for a response when contacting me during the week, and up to 48 hours on the weekends. I will use email and our Moodle site to communicate with you about course assignments, activities, and any changes to the course schedule or syllabus.

**Academic Integrity:** Plagiarism and other academic dishonesty/misconduct will not be tolerated. Cheating and dishonesty on tests/ assignments (using unauthorized sources of information, and/or providing or receiving unauthorized assistance of any form of academic work), and plagiarism (presenting someone else's material as your own) will result in an F for the assignment, and possible failure of the class and disciplinary action by the university.

It is your responsibility to know and abide by the Student Code of Conduct for Nazarbayev University. Violations of this policy may include, but not limited to, cheating, plagiarism (including "patchwriting"), aid of academic dishonesty, fraud check-in, fabrication, and threatening behavior. These instances and other academic dishonesty/misconduct will be handled according to the requirements and procedures in the Student Code of Conduct for Nazarbayev University. Students should also be familiar with the university's official statement on academic misconduct, plagiarism, cheating, and falsification of documents:

**Academic misconduct** is an act in which a student:

1. Seeks to claim credit for the work or efforts of another without authorization or citation (plagiarism);
2. Uses unauthorized materials or fabricated data in any academic exercise;
3. Forges or falsifies academic documents or records;
4. Intentionally impedes or damages the academic work or others;
5. Engages in conduct aimed at making false representation of any student's academic performance;
6. Engages in any form of cheating on an exam or assignment;
7. Assists other students in any of these acts.

**Plagiarism** is intentionally or carelessly presenting the work of another as one's own. It includes submitting an assignment purporting to be the student's original work which has wholly or in part been created by another person. It also includes the presentation of the work, ideas, representations, or words of another person without customary and proper acknowledgement of sources. Plagiarism occurs when a person:

1. Directly copies one or more sentences of another person's written work without proper citation. If another writer's words are used, you must place quotation marks around the quoted material and include a footnote or other indication of the source of the quotation. This includes cut and paste from the internet or other electronic sources;
2. Changes words but copies the sentence structure of a source without giving credit to the original source, or closely paraphrases one or more paragraphs without acknowledgement of the source of the ideas, or uses graphs, figures, drawings, charts or other visual/audio materials without acknowledging the source or the permission of the author;
3. Submits false or altered information in any academic exercise. This may include making up data for an experiment, altering data, citing nonexistent articles, contriving sources, etc.;
4. Turns in all or part of assignment done by another student and claims it as their own;
5. Uses a paper writing service, has another student write a paper, or uses a foreign language translation and submits it as their own original work;
6. In computer programming class, uses computer code written by another student.

**Cheating.** Cheating harms the very fiber of the University community. Honest students are put at a disadvantage due to the unfairness of the act and the potential that the grading structure of the class may be altered to their disadvantage. Students who cheat do not receive a real education, depriving themselves of the experience of how to learn. Cheating also damages the reputation of the University as well as the fabric of society. Finally, cheating damages the ethics of the individual, teaching them a wrong approach to life that will not be sustainable in their future careers. Cheating occurs when a person:

1. Gains or provides unauthorized access to examination materials;
2. Uses notes, mobile phones, books, calculators or other materials/devices during an examination without the permission of the instructor;
3. Copies from another student's exam sheet with or without their permission or allow a student to copy from their exam sheet;
4. Obstructs or interferes with another student's efforts in an academic exercise;
5. States a dishonest reason in a request for an extension for an exam or paper;
6. Continue to write even when time is up during un exam;
7. Talks during an examination period;
8. Asks another student take an examination or quiz;
9. Commits any other action that gives a student an unfair advantage during an examination period or on any assignment being graded for credit;
10. Assists in, facilitates, organizes or arranges any of the above-mentioned actions.

**Falsification of documents.** Falsification of documents is a form of academic dishonesty that deliberately seeks to misrepresent some aspect of the student. Falsification of Documents occurs when a person:

1. Presents a falsified application form, financial aid form or any other official form submitted to the University;
2. Presents a falsified or misleading medical certificate in order to obtain an excuse for a class absence, examination absence or late work or for any other reasons;
3. Uses a falsified or illegally altered student identification card;
4. Tampers with transcripts or other academic records.