

# Quantitative Methods in Political Science

PLS 211, Fall 2018

Professor: Sejin Koo

Room: 8.305

Office hours: W/F 1:00-2:45pm, or by  
appointment

Class time: T/TH 1:30-2:45pm

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## Course Description and Purpose

This course is designed primarily to introduce students to the use of quantitative methods in political science. We will discuss a variety of topics, including research design and concept formation, causality, description, measurement, and several techniques for assessing the relationships between variables. Class time will be devoted to lecture, discussion of assigned readings, and learning to conduct your own analyses on a software package, namely STATA for windows, one of the most widely used packages for analyzing data.

Political methodology is a large field and any introductory course must necessarily be incomplete. The goals of this course is (1) to lay a foundation for future work in industry or future coursework, by getting you familiarize research methodologies in political science and (2) to enhance your analytical skills by teaching you how to explain data and analyses in a honest and compelling manner.

## Required Readings

Our textbook for the course will be:

- Kellstadt, Paul M., and Guy D. Whitten. 2015. *The Fundamentals of Political Science Research*, Second Edition. New York: Cambridge University

We also have a supplementary textbook:

- Acock, Alan C. *A Gentle Introduction to Stata*, revised third edition.

Both books can be borrowed from NU library.

## Required Practices

I provide several online links to help you practice Stata by yourself at home. Each webpage provides Stata codes (and results) in a simple and easy way. This assignment is not graded, but students are expected to complete required practices before coming to class.

In addition, I may assign other required readings and practices during the semester, which will be available through Moodle.

## Course Requirements and Grading Policy

I will assign your final course grade as follows:

- **Homework (8%+10%+10%+12%=40%)**

Students will be assigned four homework assignments during this course. I will give you a reasonable amount of time to complete each HW assignment (at least one week between assigning and submission), considering that students have assignments from other courses, too. Although your HW-related questions will be welcome if you want to discuss with me, **I will not respond any last-minute request or questions (for example, on the day of due or at night right before the due day).**

- **Short Assignments (10%)**

During class, I will assign various exercises or short assignments that reinforce the class material. Most of these exercises will be completed in class. They will not necessarily all be announced ahead of time.

Hopefully, everyone will make a good effort on the assigned readings and practices before class, as well as class lectures. If so, this can be a free 10%. Short assignments include pop quizzes. If students consistently come to class unprepared, then I'll start giving pop quizzes at a frequency that seems appropriate.

All of the exercises will simply be graded satisfactory (S) or not. You will receive credit only for those that you complete on time and in a satisfactory manner.

If you are not in class that day without a University excused absence, you will receive a score of zero (**you must be physically present in the classroom**). If a student misses an assignment as a result of a University excused absence, he or she will receive an "E" for that assignment. **The final short assignment grade will be calculated as the number of S scores received out of all non-E assignments. There will be NO MAKE-UPS for short assignments.**

Again, many of these short assignments require you to **read the assigned readings and to do the assigned practices. Be prepared before coming to class.**

- **Tests: Test 1 (15%) and Test 2 (20%)**

There are two closed-book tests in this course. The final test is cumulative—that is, they will cover everything that was taught up to the point of the exam dates. This is not at all because I am a sadist; the nature of quantitative methods is that **it is impossible to follow up if you failed to understand materials discussed in previous classes**. Tests may include short-answer questions and essay questions. All material from the readings and class will be fair game, but you should expect tests to closely resemble the homework problems and short assignments. Consider homework problems and short assignments as the study guide and our discussion of them as the review for the test.

Make-up tests will only be given if you have a university excused absence, and in such cases the exam can be harder.

- **Class Attendance (15%)**

Class attendance is mandatory and will be taken in each session. That is, if you show up late, you will be counted absent. Only university excused absences will be considered.

In order to learn, it is imperative that you attend class, read the material, and participate actively in class discussion. As explained above, many of the exercises will be completed in class only. If you miss a class, it is your responsibility to obtain the missed material from your classmates. In addition to attending class, students are highly encouraged to ask and answer questions, and to make appropriate comments on issues covered in class.

- **Participation (Extra 5%)**

Engaging with the readings, practices, and assignments, both in-class and out-of-class, are crucial to success for you and the class as a whole. I'll award up to five points extra credit for students who consistently engage with the material **in a productive and respectful manner.**

Any decision with respect to extra credit (e.g., judgement on whether a student deserved an extra credit or whether to offer an extra credit assignment) is made solely by me. **If I feel any implicit or explicit coercion on your part regarding extra credit as well as final grade, it will be treated as an academic misconduct (category B offense).**

- **Grading Scale**

A	95%-105%	Excellent, exceeds the highest standards in the assignment or course
A-	90%-94.9%	Excellent; meets the highest standards for the assignment or course
B+	85%-89.9%	Very good; meets high standards for the assignment or course
B	80%-84.9%	Good; meets most of the standards for the assignment or course
B-	75%-79.9%	More than adequate; shows some reasonable command of the material
C+	70%-74.9%	Acceptable; meets basic standards for the assignment or course
C	65%-69.9%	Acceptable; meets some of the basic standards for the assignment or course
C-	60%-64.9%	Acceptable, while falling short of meeting basic standards in several ways
D+	55%-59.9%	Minimally acceptable
D	50%-54.9%	Minimally acceptable; lowest passing
F	0%-49.9%	Did not satisfy the basic requirements of the course

- **Academic misconduct policy**

Students must obey the requirements and procedures in the Student Code of Conduct for Nazarbayev University. The penalty for any type of plagiarism or cheating will be an “F” on the test or the paper/assignment. As commonly defined, plagiarism consists of passing off one’s own ideas, words, writings, etc., which belong to another. In accordance with the definition, you are committing plagiarism if you copy the work of another person and turn it in as your own, even if you should have the permission of the person. Plagiarism is one of the worst academic sins, for the plagiarism destroys the trust among colleagues without which research cannot be safely communicated. If you have any questions regarding plagiarism, please consult Nazarbayev University Student Code of Conduct.

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.

(Nazarbayev University Student Code of Conduct)

**Plagiarized work or cheating will result in the penalty of zero for the assignment or the exam. In addition, the case will be referred to SHSS Disciplinary Committee.**

- **Grade Appeals**

Students who believe they have received an incorrect test grade should formally appeal in to me. The appeal should consist of a single typed page that identifies the problem and presents concrete reasoning to substantiate why the test should be re-evaluated. Note that a request for re-evaluation means that I will examine your entire test for a second time and may lower your grade upon closer examination of your work.

- **Penalties for missed exams and late papers**

If you miss a test because you have a university acceptable excuse (such as sickness with a note from your doctor) you must contact me by the end of the second working day after the absence to ensure full rights to take a makeup exam. Preferably contact me before the test. If you know you will miss a test in advance because of scheduled university excused travel, talk to me as far in advance as possible. If you do not have a university acceptable excuse for missing a test, you will not be allowed to take the test and your grade will be 0.

Problems with computers or printers are not acceptable excuses for late assignments. Assignments turned in past due date will receive no credit, unless you have a university acceptable excuse for your paper being late. To prove that you have a university acceptable excuse, (1) submit an original copy of proof AND also (2) submit a scanned copy of it via email.

**Should you have any question about any aspects of this course or experience difficulty, do not wait until the last minute to discuss it with me. You may reach me either during my office hours or by appointment.**

- **Copyright on Course Materials**

All handouts used in this course are copyrighted. By “handouts,” I mean all materials generated for this class, which include but are not limited to syllabi, exams, and in-class materials. Because these are copyrighted, you do not have the right to copy the handouts, unless I expressly grant permission.

- **Commitment to Diversity**

This course welcomes individuals from any racial, ethnic, religious, age, gender, sexual orientation, class, disability, and nationality. In the spirit of this vital commitment, in this course each voice in the classroom has something of value to contribute to all discussions. Everyone is expected to respect the different experiences, beliefs and values expressed by

fellow students and the instructor, and will engage in reasoned discussion that refrains from derogatory comments about other people, culture, groups, or viewpoints.

- **Other Class Policies**

First, while you are welcome to email anytime about any issue you may be having in the class, please use proper email etiquette. Start your email “Dr. Koo,” Dear Dr. Koo,” or Dear Professor Koo” for initial contact. I will not answer emails that use improper salutation. I will also not answer emails that can be answered by looking at the syllabus.

Second, **your final grade is final. It is not a basis for negotiations. If you plan to graduate this spring, or if you need a good grade from this course for whatever reason, the only possible way is working hard. Awarding a student a better grade than she/he deserves based on her/his official course grading record is a violation of job ethics for me. Also, it is a crime deceiving your government and tax-paying fellow citizens.**

Lastly, I reserve the right to make changes to the syllabus as needed, including adding and subtracting assignments and changing due dates. I will notify you in class, via Moodle, or via email about changes (this means you are responsible for checking your email and for being in class to hear about changes).

### Tentative Course Outline

M	D	Topic	HW Assign & Due	Required Reading	Required Practice and Video
Aug	14	Course Introduction			
	16	Scientific Study of Politics		K&W ch 1	
	23	Theories and hypotheses	Assigned: HW1	K&W ch 2	<a href="https://www.youtube.com/watch?v=Y2qrqC xvV8k">https://www.youtube.com/watch?v=Y2qrqC xvV8k</a> <a href="http://www.ats.ucla.edu/stat/stata/modules/syntax.htm">http://www.ats.ucla.edu/stat/stata/modules/syntax.htm</a>
	28	Stata Lab 1: Basics (Room: 8.322)		K&W ch 4	<a href="http://www.ats.ucla.edu/stat/stata/modules/if.htm">http://www.ats.ucla.edu/stat/stata/modules/if.htm</a> <a href="http://www.ats.ucla.edu/stat/stata/modules/descript.htm">http://www.ats.ucla.edu/stat/stata/modules/descript.htm</a>
Sep	4 6	Causality	Due: HW1	K&W ch 3	the danger of mixing up causality and correlation( <a href="https://www.youtube.com/watch?v=8B271L3NtAw">https://www.youtube.com/watch?v=8B271L3NtAw</a> )
	11	Research Design		K&W ch 4	Spousal age gap affects marriage satisfaction over time ( <a href="http://www.colorado.edu/today/2017/08/03/spousal-age-gap-affects-marriage-satisfaction-over-time">http://www.colorado.edu/today/2017/08/03/spousal-age-gap-affects-marriage-satisfaction-over-time</a> )
	13 18	Measurement and descriptive statistics	Assigned: HW2	K&W ch 5	<a href="http://www.ats.ucla.edu/stat/stata/modules/usesave.htm">http://www.ats.ucla.edu/stat/stata/modules/usesave.htm</a>
	20	Stata Lab 2: Descriptive statistics and graphs (Room:		K&W ch 5	<a href="http://www.ats.ucla.edu/stat/stata/modules/vars.htm">http://www.ats.ucla.edu/stat/stata/modules/vars.htm</a> <a href="http://www.ats.ucla.edu/stat/stata/modules/graph8/intro/graph8.htm">http://www.ats.ucla.edu/stat/stata/modules/graph8/intro/graph8.htm</a>

		8.322)			
Sep	25 27	Probability theory and statistical inference	Due: HW2	K&W ch 6	<a href="https://www.khanacademy.org/math/statistics-probability/random-variables-stats-library#discrete-and-continuous-random-variables">https://www.khanacademy.org/math/statistics-probability/random-variables-stats-library#discrete-and-continuous-random-variables</a> (all the videos and practices under the title of <Discrete and Continuous Random Variables>)
Oct	2	More on statistical inference		K&W ch 6	<a href="https://www.khanacademy.org/math/statistics-probability/random-variables-stats-library#expected-value-lib">https://www.khanacademy.org/math/statistics-probability/random-variables-stats-library#expected-value-lib</a> (all the videos and practices under the title of <Expected Value>)
Oct	4	Test 1			
	16	More on statistical inference & sample size	Assigned: HW3	K&W ch 6	<a href="https://www.khanacademy.org/math/probability/statistics-inferential/sampling-distribution/v/central-limit-theorem">https://www.khanacademy.org/math/probability/statistics-inferential/sampling-distribution/v/central-limit-theorem</a> (all the seven videos under the title of <Sample Means>)
	18 23	Bivariate hypothesis testing		K&W ch 7	<a href="https://www.youtube.com/watch?v=V4SRgabFbz0">https://www.youtube.com/watch?v=V4SRgabFbz0</a> (tabular analysis) <a href="https://www.youtube.com/watch?v=LXTCbOyDIlo">https://www.youtube.com/watch?v=LXTCbOyDIlo</a> (difference of means test)
	25	Stata Lab 3: Three Bivariate tests (Room: 8.322)	Due: HW3	K&W ch 7	<a href="http://www.stata.com/manuals13/gsw1.pdf">http://www.stata.com/manuals13/gsw1.pdf</a> <a href="http://www.ats.ucla.edu/stat/stata/modules/stats.htm">http://www.ats.ucla.edu/stat/stata/modules/stats.htm</a>
	30	More on Bivariate hypothesis testing		K&W ch 7	
Nov	1 6	The bivariate regression model	Assigned: HW4	K&W ch 8	<a href="http://www.ats.ucla.edu/stat/stata/webbooks/reg/chapter1/statareg1.htm">http://www.ats.ucla.edu/stat/stata/webbooks/reg/chapter1/statareg1.htm</a>
	8	Stata Lab 4: Bivariate regression (Room: 8.322)		K&W ch 8	Hamermesh, D.S. and Parker, A., 2005. Beauty in the classroom: Instructors' pulchritude and putative pedagogical productivity. <i>Economics of Education Review</i> , 24(4), pp.369-376.
	13	The multiple regression model		K&W ch 9	
	15	Stata Lab 5: Multiple regression (Room: 8.322)	Due: HW4	K&W ch 9	
	20 22	More on the multiple regression model		K&W ch 9	
TBA		Test 2			