Bard College Berlin
A LIBERAL ARTS UNIVERSITY

SO324 Quantitative Methods in Social Sciences

Spring semester 2021

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Course Description

The course introduces students to the use of quantitative methods for investigating issues in social and political science. The emphasis is on practical applications of quantitative reasoning: how to ask a testable question, how to attain data, visualize it, and present it. And finally how to analyze the data using inference statistics (and answer the question). In this course we will closely follow the textbook by **Pollock III and Edwards (2020)** and we will cover different topics, such as how to think about political and economic concepts, how to measure variables, and how to describe and analyze them using inferential statistics, correlation coefficient, and also linear regression. We will discuss features of acceptable explanations in economics and political science, and how to frame hypotheses and make comparisons. We will also cover issues in research design (an overall set of procedures for testing explanations). We will work with a spreadsheet and statistical software (Stata). Finally, students will have to conduct their own research project and present it in class.

Learning Outcomes

- Understand the meaning of causal inference and of testable idea.
- Learn how to think of and formulate testable hypotheses
- Learn how to present and visualize data
- Learn to employ inferential statistics to test an hypothesis
- Ability to conduct and present own empirical research project
- Capability to work with spreadsheet and statistical software

Requirements

Prerequisites

This is an applied/advanced statistics course. Students taking this class should have already successfully completed the Statistics course

Textbook

For this course, we will use the following textbook:
Philip H. Pollock III and Barry C. Edwards (2020) The Essentials of Political Analysis, 6th Edition , CQ press, an imprint of Sage.

Other reading sources will be distributed during the course.

Statistical Software

We will work with Stata.

https://www.stata.com/order/new/edu/profplus/student-pricing/

Attendance

Attendance at ALL classes is expected. More than two absences (that is absences from two sessions of 90 minutes) in a semester will significantly affect the grade for the course.

SPECIAL CONSIDERATIONS FOR SPRING 2021

Some students might need to begin the semester remotely due to travel restrictions caused by the pandemic. In addition, all students and instructors must refrain from in-person attendance if they are feeling ill. Instructors should make efforts to offer alternatives to in-person attendance where needed, including remote participation or asynchronous options.

Use of cellphones

Cellphones are not allowed during the classes (not even as calculators). Please leave your cellphone in your bag during the classes.

Assessment

Assessment will be based on the following three main components:

- Active participation (this can includes eexercises and quizzes): 20%
- Midterm exam or an equivalent essay (if an essay, possibly in pairs): 30%
- Presentation of your empirical research study (in pairs) and final paper: 50% (30% for the presentation; 20% for a final paper).

Policy on late submission of exercises or written work

Exercises and essays that are up to 24 hours late will be downgraded one full grade (from B+ to C+, for example). After that, we will accept late submissions only until the end of the week in which they were due (Sun, 23:59), but these cannot receive a grade of higher than C. Thereafter, the student will receive a failing grade for the assignment.

Schedule

Classes start on Wednesday, February 3 and run until Wednesday, May 12, with spring break planned for Mar 29 – Apr 5. Completion week is from May 17-21. Attendance is mandatory during completion week

The schedule provided is provisional in order to allow for flexibility. It is the students' responsibility to keep themselves informed of any changes to the schedule provided here. An up-to-date schedule will be maintained by the course management on the internet in Google classroom. The password to join Google classroom will be handed out in class.

Introduction	Week 1
The Definition and Measurement of Concepts	Week 2
Measuring and Describing Variables	Week 3
Proposing Explanations, Framing Hypotheses, and Making Comparisons	Weeks 4-5

Research Design, Research Ethics, and Evidence of Causation	Week 6-8
Making Controlled Comparisons	Week 9
Foundations of Statistical Inference	Week 10
Tests of Significance and Measures of Association	Week 11
Correlation and Linear Regression	Week 12-13
Final presentation	Week 14

Classes missed due to federal holidays will not be rescheduled.

Professionalism

Being a student is your full-time job and with it come a set of responsibilities and expectations, as with any other job. Maintaining a professional attitude towards your course of study is something that also prepares you for later work life. A professional attitude towards your studies is shown by coming to class on time, being prepared, being courteous to your teachers and fellow students. It is exhibited by writing your essays with care, actively participating in class, avoiding distractions (excessive bathroom breaks, using smartphones to check on irrelevant issues during class etc.), not missing classes except for the most dire of circumstances and in general by adapting to the rules of the course without trying to bargain for personal exceptions.

Ethics/Academic honesty

A core value of the academy is truth and the pursuit thereof. Nothing can shake the foundations of this pursuit as much as academic dishonesty as it undermines the trust that is indispensable to it. This is why I will not excuse any instance of academic dishonesty. Plagiarism, cheating during exams, copying homework assignments (or doing individual assignments with a classmate) all constitute violations of academic honesty and of the clause on "academic integrity" that each student has signed in the student handbook. They can lead to failing the course and will be reflected in the student's record (having a record of academic dishonesty can make obtaining scholarships, achieving a study abroad place or admission to another program difficult if not outright impossible).

(this version: January 7, 2021)