Description: This course introduces graduate students to experimental methods in the social sciences, with specific application to political science. We will discuss the logic of experimentation, its strengths and weaknesses compared to other methodologies, and how experiments can be used to investigate social phenomena. Students will learn how to interpret, design, and execute experiments. Each session of the course will be a combination of lecture and discussion.

Prerequisites: Some understanding of probability, hypothesis testing, and regression will be assumed. Familiarity with statistical software (Stata and R) is helpful but not required.

Assignments: You will be asked to complete three sets of assignments for this course:

1. Three problem sets (10% of final grade): I will be looking to see that you made a concerted attempt to answer each problem. I will post solutions that you can use to check your responses.

2. Two review papers (30% of final grade): You will write reviews of two application papers from two different weeks, due at the beginning of the session in which that paper is assigned. These reviews should critically assess the paper in terms of the experimental methodology being employed. Your review should be no longer than 5 pages, double-spaced. You will also be expected to lead the discussion of that paper.

3. You have two options for the main written assignment (50% of final grade):
   a. Group research paper based on a laboratory experiment: You will form a group of no more than 3 students to design, implement, and analyze an actual lab experiment. In consultation with me, you will write a brief research proposal, design your lab experiment using zTree software, run the experiment in the BRITE lab, analyze your data, and submit a written paper by the end of the semester. Ideally, this could lead to a publication!
   b. Experimental research proposal: By the end of the semester, you will submit a research proposal that motivates and describes a social-science experiment. Your proposal should discuss the research questions and existing literature (very briefly!), the proposed experimental design, what you expect to find, how you intend to analyze the data, and how you expect to address potential pitfalls and criticism. I will assess your proposals on the match between research question and experimental design, the creativity of the design, and the thoroughness of the proposed analysis.
Attendance (10% of final grade): I expect you to attend as many sessions of the course as possible and to engage with and contribute to discussion.

Required texts: Most weeks will include some theoretical readings and some applications of the concepts in political or another social science. Students are expected to keep up with each week’s reading. Consider purchasing the following books, which we will use repeatedly throughout the semester:


Assigned readings from edited volumes will be available online at Learn@UW. Students can download journal articles directly.

**Course outline**

**September 9 – Why Experiments?**

- Gerber and Green, Chapter 1

**September 16 – Potential Outcomes and Causal Inference**

- Gerber and Green, Chapters 2 and 3
- Morton and Williams, Chapter 3

**September 23 – Validity**

- Morton and Williams, Chapters 7 and 8
- Dunning, Chapter 10

**Problem set 1 due**

**September 30 – Natural Experiments: “True” Randomization**

*Theory:*
- Dunning, Chapter 2

*Applications:*

**October 7 – Natural Experiments: “As-If” Randomization**

*Theory:*
- Dunning, Chapters 3, 4, and 8

*Applications:*

**October 14 – Lab Experiments**

*Theory:*
- Morton and Williams, Chapters 9 and 10

*Applications:*
- Renshon, Jonathan, Jooa Julia Lee, and Dustin Tingley. 2013. “Physiological Arousal and Political Beliefs.”

**Problem set 2 due**

**October 21 – Survey Experiments**

**Theory:**

**Applications:**

**October 28 – Field Experiments**

**Theory:**
- Gerber and Green, Chapter 4

**Applications:**

**November 4 – Noncompliance**

**Theory:**
- Gerber and Green, Chapters 5 and 6

**Applications:**

**November 11 – Interference**

**Theory:**
- Gerber and Green, Chapter 8

**Applications:**

**Problem set 3 due**

**November 18 – Heterogeneous Treatment Effects and Mediation**

**Theory:**
- Gerber and Green, Chapters 9 and 10
Applications:

November 25 – Pre-Treatment and Post-Treatment

December 2 – Ethics
- Morton and Williams, Chapters 12 and 13

December 9 – Taking Stock
- Dunning, Chapter 11