PO 204 Data in Politics

9:30-10:50, T/TH
Fall 2022

Office hours: 11-12:30 T/TH, 1-3 W
Schedule a meeting with me on Calendly

Instructor: Dr. Bi Zhao   E-mail: bzhao@whitworth.edu

Course Description

This course provides an introduction to the scientific analysis of political phenomenon (a.k.a. research design) and the data we use to answer substantive questions about politics. The focus of this course is twofold. First, it seeks to introduce students in political science and related social science disciplines key approaches and elements of research design. Second, it focuses on using data as a tool to help us understand politics. What are data? What are some different types of data? How do we interpret them, identify potential frauds, and communicate about them? What ethical concerns are specific to the big data context? The course is designed to help students become better "consumers" of information from both academic and non-academic resources. It also helps students to start their own journeys in producing political science research, preparing them for future courses with a research design or research paper component.

This course emphasizes the hands-on experience of students in learning political data. Students will collect their own data, experiment with available data of different kinds (numerical, text, and image). This course will focus on introducing basic and practical skills of data management, interpretation, and visualization, using RStudio.

In addition, we will consider the ethical implication of a "datafied" world. With the arrival of big data and the development of data science, what does an ethical practice in which data are collected, interpreted, and used look like, especially in the political realm of our society? What role can the religious community play in these matters? We will discuss these questions throughout the semester.

Student Learning Outcomes (SLOs)

- **Students will gain knowledge of the central concepts of three subfields in political science: American Politics, International Relations, Comparative Politics.**
  This course will introduce students to data sets widely used by researchers in American

Politics, International Relations, and Comparative Politics. Students will explore and interpret the data, connecting the fundamental concepts and theories in political science with real world facts and figures.

- **Students will be able to articulate their own worldview as it relates to political life.**
  Students will learn a new way of articulating their understanding of political phenomena. Using data, they will answer substantive questions related to politics. They will also examine the interpretation of data from various sources and consider the subjectivity in data analysis, which reflects the underlying worldviews.

- **Students will practice civic engagement by applying knowledge of political science concepts.**
  In this class, students will exercise civic engagement by collecting political opinion data from the community. They will have the opportunity to present the findings to the community. Students will also consider the ethical issues around the use of data.

Textbooks and Readings

- **Kellstedt, Paul M., and Whitten, Guy D.*Fundamentals of Political Science Research*. Cambridge University Press, 3rd edition. (required)**

- **O'Neil, Cathy. 2016. *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Dmocracy*. Crown Publishing. (required)**

- Wheelan, Charles. 2013. *Naked Statistics: Stripping the dread from the data.* W.W.Norton. (recommended)
  (We will read a few chapters of the book. But you are not required to purchase the book. I will post the readings on Blackboard. The book is also available at Whitworth library.)

- Best, Joel. 2013. *Stat-spotting: A Field Guide to Identifying Dubious Data*. University of California Press. (Recommended, e-book available from Whitworth library website)

- Additional readings will be available through Blackboard.

How to succeed in this course

1. This is what I would call a data literary and research methods class. There is learning of statistics involved. You might say, *I'm just not a math-person!* I do not want you to be afraid. I will try my best to make it accessible and provide lots of examples. And I promise this will be helpful for your future classes/research projects.
   But you need to always try your best. Be self-motivated and disciplined. Speak up when questions arise. There are no stupid questions in this class, always okay to raise your hand, anytime! Find your peeps to study (and vent) together. And I am always here to help you, so is our wonderful TA.

2. Know your syllabus. If there is any changes to the syllabus, I will notify you as soon as possible. It is your responsibility to be informed about the content, deadlines, and changes of this syllabus.

3. Class attendance and active participation in class discussion. The sign-up sheet is passed around at the start of the class. You are responsible for signing the attendance sheet each day you are in class. Once you leave class, the sign-in sheet is official; you cannot return and tell me you forgot to sign the sheet.

4. Read the assigned readings prior to each class meeting. It is your responsibility to be prepared for the class. Coming to class prepared will greatly enhance your understanding of the lecture and subsequently your grasp of the course.

Policies

Grading Policy

- **Attendance and participation, 10%**.
  Class attendance will be graded both by the percentage of classes attended and the degree of active participation during class. The basic attendance grade will be the percentage of classes a student attends (not counting exams): for example, a student who comes to 28 out of 30 classes would get a grade of 93%, or an A. This percentage will then be adjusted upwards by as much as 10% based on active, constructive class participation. For this system, there are no excused or unexcused absences, except for students with documented reasons requiring them to miss class for official extra-curricular activities.
  What is class participation? Participation does not simply mean talking a lot in class, although joining in discussion is strongly encouraged. Participation also involves coming to class prepared (having done the reading), thinking and listening carefully, and contributing to an open classroom environment where thought and discussion are possible. In addition, students are welcome and encouraged to visit the instructor individually during office hours or by appointment.
  A WORD ON ELECTRONIC DEVICES IN THE CLASSROOM I do not want to police your use of laptops and other devices for class purposes. But just for the record, any student who uses their electronic devices for non-class purposes will lose points from the participation grade. My policy is based on the fact that multi-tasking during class on your laptop, texting, and any use of cell phones is disruptive to the learning environment.How you take notes is your business. Still, I would encourage you to consider the virtues of writing class notes in a notebook ("old school"), and not your computer. Transfer the important notes to your computer after class as a way of reviewing the material. Studies show that taking notes by hand, rather than laptop, increases student learning. See Scientific America for details.

- **Homework assignments and problem sets, 25%**,
  Homework assignments and problem sets. There will be 8-10 homework assignments and problem sets throughout the semester. The goal of homework assignments is to help you to implement what we learn in the class and for later in the semester, practice various data interpretation and visualization techniques. Each homework assignment or problem set will be distributed on Thursday (after class) and due by the subsequent Monday noon.

- **Quizzes, 15%**.
  here will be **four** quizzes throughout the semester, covering *only the reading material for that day*. Most quiz days, we will take the quiz at the beginning of class. The dates of the quizzes will *not* be

announced in advance. Quizzes are designed to provide a quick evaluation of how well you keep up with readings and understand the contents. Each quiz is worth 15 points. The average of the four quiz scores will be calculated into the final score.

- **Data collection (due after Fall Break), 10%.**
  You will conduct "interviews" to collect your own data. We will then pool these data together for analysis. More instructions to come.

- **U-pick assignment on data ethics, 10%** Throughout the semester, we will discuss ethical issues around data collection and usage. As a final project, you will pick a format and discuss one or more ethical issues related to data. The format options include but do not limit to an infographic poster, an educational pamphlet, a podcast, a series of social media contents, a quotebook, a policy memo, a board game, etc.. Presentation of your project is optional. If you choose to do so, you will earn 3 extra credit points for the course. Detailed instructions will be communicated in class and on Blackboard.

- **Midterm and final exams, 30%**. Midterm: 10/25, in class. Final: 12/15, 8-10 am.

- **Missed or late work.** Late work will be penalized by one letter grade for each day after the deadline. For example, an A- for a problem set solution turned in one day late will become a B-. Late work would only be accepted without grade-penalty if the student has university-accepted excuses.

- **Make-up exams/quizzes.** In the case of missing exams or quizzes due to participating university-sponsored activities, the student is responsible for communicating with the instructor as far in advance as possible. Then make-up details will be discussed. Make-up exams/quizzes will not be accommodated for any reasons other than university-sponsored or -related activities, except under extreme and emergency situations.

- **Final grades:**

A	B	C	D	F
A+=97-100	B+=87-89.99	C+=77-79.99	D=60-69.99	F=below 60
A=93-96.99	B=83-86.99	C=73-76.99		
A-=90-92.99	B-=80-82.99	C-=70-72.99		

Schedule and weekly learning goals

Every week, we will focus on the research design and statistics on Tuesday and half of the class on Thursday. For the rest of Thursday, we will have an open-ended discussion on the O'Neil book and the social-political impact of big data.

The schedule is tentative and subject to change. The learning goals below should be viewed as the key concepts you should grasp after each week. Each exam will test on the material that was taught up until the exam. The applications in the second half of the semester tend to build on the concepts in the first half of the semester though, so it is still important to at least review those concepts before the final exam.

Week 01, 09/05 - 09/09: Introduction

Week 02, 09/12 - 09/16: What is science? Is political science a science?

- Tue: Science as a search for causal explanations

- Thur: Variables and their relationships

- **Assignment 1, KW p23, Q7**

Week 03, 09/19 - 09/23: Creating research questions, theories, and hypotheses

- Tue: Strategies of theory-building [1]

- Thur: Strategies of theory-building [2]

- **Assignment 2, KW p52, Q1-4 (Apply Q4 to class question)**

Week 04, 09/26 - 09/30: Causal inference

- Tue: Evaluating causal relationships

- Thur: Causal relationships continued

- **Assignment 3, KW p74-76, Q1/3-7/9, class question**

Week 05, 10/03 - 10/07: Research design

- Tue: Experiments and quasi-experiments

- Thur: Observational studies

- **Assignment 4 (research design for class question)**

Week 06, 10/10 - 10/14: Measurement, reliability, and validity

- Tue: Reliability and validity

- Thur: Measurement

- **Assignment 5, KW p123-124, Q1-3, class question**

Week 07, 10/17 - 10/21:   Sampling and data collection

- Tue: How to approach our question?

- Thur: Mid-term review

Week 08, 10/24 - 10/28:   **Midterm exam**

- Tue: **in-class exam**

- Thur: No class (***data collection due after fall break***)

Week 09, 10/31 - 11/04:   Descriptive statistics

- Tue: Who's best baseball player?

- Thur: Descriptive statistics

- **Assignment 6, TBD**

Week 10, 11/07 - 11/11:   Statistical inference

- Tue: Making statistical inference

- Thur: Why my statistics professor thought I might have cheated

Week 11, 11/14 - 11/18:   Bi-variate hypothesis testing

- Tue: Tabular and difference of means [1]

- Thur: Tabular and difference of means [2]

- **Assignment 7, TBD**

Week 12, 11/21 - 11/25:   Bi-variate hypothesis testing

- Tue: How does Netflix know what movies I like

- Thur: Thanksgiving, no class

Week 13, 11/28 - 12/02:   Regression analysis

- Tue: The miracle elixir

- Thur: Regression analysis

- **Assignment 8, TBD**

Week 14, 12/05 - 12/09:   Data ethics presentation and final exam review

Week 15, 12/12 - 12/16:   Final exam: **12/15 (Thursday), 8-10 am**

University Policies

Academic Integrity and Honesty

Please note that I take extremely seriously the university's policy on the need for academic honesty in all your work. **Please note the university's policy on academic honesty (available in the Whitworth Catalog and the Student Handbook). Consequences for any form of dishonesty may range from a failing grade on a specific assignment to a failing grade in the course. Violations of the academic honesty policy become part of your educational record.**

Accommodations for Religious Observances

In accord with SSB 5166, Whitworth University accommodates student absences, for up to two days per academic year, for reasons of faith or conscience, or for an organized activity conducted under the auspices of a religious denomination, church, or religious organization. Written notice and request for accommodation must be given within the first two weeks of the beginning of the course and provide specific dates the student requests accommodation. Faculty will work with such students to reach mutual agreement about the terms of the accommodation. Grievances about a failure to accommodate should be directed to the Associate Provost.

Accommodations (ADA/504)

Whitworth University is committed to providing its students access to education. If you have a documented physical or mental/psychological impairment that impacts your ability to learn and perform to your potential in the classroom, contact the Office of Educational Support Services (ESS) in Student Life to identify accommodations that can help mitigate barriers to your success. Students must contact ESS each term in order for faculty/staff to be notified of your accommodations. Services are not retroactive.
To request accommodation, fill out an application on the ESS webpage:
https://www.whitworth.edu/cms/administration/educational-support-services/
Contact Information
Katie McCray, Coordinator for Educational Support Services
Phone: 509.777.3380
Email: kmccray@whitworth.edu

Title IX

Whitworth University faculty members are committed to the well-being of each student. It is common for students to discuss non-course related issues with faculty and, when possible, faculty will keep such conversations strictly confidential. However, because federal law views faculty members as mandated reporters of any incidents of sexual misconduct, if a student informs a faculty member of an issue of sexual harassment, sexual assault, or discrimination, the faculty member is required by federal law to bring it to the attention of the Title IX Coordinator, Rhosetta Rhodes. The Title IX Coordinator will make the student aware of all options and resources available to them under Whitworth University policies and under the law.
There are Whitworth University employees whom federal law does not view as mandatory reporters, to whom a student could speak without the conversation being reported to the Title IX

Coordinator. These include counselors in Counseling Services, health center staff, and any of the university chaplains on the staff of Campus Ministries.
Contact Information
Rhosetta Rhodes, Title IX Coordinator, Vice President for Student Life and Dean of Students
Phone: 509.777.4536; Email: titleixcoordinator@whitworth.edu
Counseling Center: 509-777-3259; Schumacher Hall
Campus Ministries: 509-777-4345; Beeksma Family Theology Center
Health Center: 509-777-3259; Schumacher Hall

Non-discrimination

Whitworth University is committed to delivering a mission-driven educational program that cultivates in students the capacity to engage effectively across myriad dimensions of diversity. Whitworth University is committed to the fair and equal treatment of all students in its educational programs and activities. The University does not discriminate against students based on race, color, national origin, sex, gender identity, sexual orientation, religion, age, or disability and complies with all applicable federal or state non-discrimination laws in its instructional programs.

Fair and equitable treatment

Whitworth University professors strive to treat all students fairly and equitably, applying the same rigorous standards and expectations to each of our students and working to invite students from all backgrounds into the challenges and rewards of our academic disciplines. Students who have concerns about classroom fairness should contact Associate Provost Brooke Kiener, McEachran Hall 220, 509.777.4657, bkiener@whitworth.edu.

Safety Information

Whitworth University cares about your welfare in the event of an emergency. During the first week of this course, please familiarize yourself with safety information posted in this classroom. Please visit https://www.whitworth.edu/generalinformation/healthsafety/index.htm if you have further questions.

Classroom Behavior (from the 2020-2021 catalog)

Students and faculty are expected to demonstrate civility, understanding and mutual respect. Disruptive classroom behavior will not be tolerated. Disruptive behavior may include, but is not limited to, threatening or abusive language or behavior, making unreasonable demands on faculty for time and attention, erratic and/or irrational behavior, continually speaking without being recognized, other verbal or behavioral expressions that interfere with the classroom environment, bringing unregistered persons to class without the permission of the instructor, and persistent disruptions including inappropriate computer use, ringing of electronic devices, etc. If a student exhibits disruptive classroom behavior, the faculty member should confront the student, clearly identify the disruptive behavior, and require that the behavior cease. A faculty member may at

any time remove a student from the classroom for disruptive behavior. A faculty member, in consultation with the department chair or program director, may develop a classroom behavioral contract outlining expectations and consequences for a student who does not meet expectations, or may refer a disruptive student to the associate provost for instruction.

The associate provost will meet with any student who is referred, or who continues to disrupt the learning environment. Students may be placed on behavioral probation or suspension based on the nature of the disruption. Behavioral suspension may include suspension from one or more classes for the duration of the current term or for a longer period.