Public Affairs 818: Introduction to Statistical Methods for Public Policy Analysis  
Fall 2020

INSTRUCTOR  
Ross Milton, Assistant Professor of Public Affairs  
Email: rtmilton@wisc.edu

INSTRUCTOR AVAILABILITY  
Drop-in office hours:  
• Tuesdays 9:30-11:30  
Via Zoom or in person as the situation allows.  
https://uwmadison.zoom.us/j/99918036916  
Or make an appointment to meet at another time via https://rossmilton.youcanbook.me/ or email.

TEACHING ASSISTANT  
Teaching Assistant: Sakina Shibuya  
TA Office Hours: TBA  
TA Email: sshibuya2@wisc.edu

MEETING TIME AND LOCATION  
Lecture: Mondays and Wednesdays 11:00AM-12:15PM in Computer Science 1221  
Discussion 301: Thursdays 8:50AM-9:40AM in Psychology 130  
Discussion 302: Thursdays 9:55AM-10:45AM in Psychology 115  
Discussion 303: Thursdays 11:00AM-11:50AM in Psychology 103

COVID-19 Considerations  
For everyone’s safety, all campus policies regarding COVID-19 must be followed.

Course Information  
This is a course about describing data. We will learn how to visualize data in ways that are easily understood and what considerations must be made to do so, how to compare groups, and how to investigate the relationships between characteristics. To do so we will learn the basics of regression, probability, and statistical inference. These are the necessary statistical tools to effectively organize and interpret data and present those findings to the world.  

By the end of the course, you should be comfortable applying these techniques in policy analysis. In addition, you should have sufficient experience with the statistical software Stata to use it in future courses and independently.  

The goal of the course is to teach practical statistical methods and intuition, not to test your mathematical abilities. Basic arithmetic and algebra skills are sufficient to excel in the course when combined with consistent diligence throughout the semester.

REQUIRED TEXT
Other readings will be distributed via the Canvas course page.

**REQUIRED SOFTWARE**
We will learn statistics and also learn how to use computer software to implement the statistics we learn. We will be using Stata, a popular statistical software package used by many social scientists, policy analysts, and other La Follette courses. So, we need:

- Access to Spreadsheet software (Excel or Google Sheets)
- Access to Stata. Three methods are freely available through UW.
  1. Access through the Social Science Computing Cooperative’s (SSCC) Winstat servers. If you do not already have a SSCC account, you can request one here [https://www.ssc.wisc.edu/sscc_jsp/account/lab/](https://www.ssc.wisc.edu/sscc_jsp/account/lab/). This allows you to access a full windows desktop with space to save your files from any computer. More information about connecting to Winstat is here [https://www.ssc.wisc.edu/sscc/pubs/winstat.htm](https://www.ssc.wisc.edu/sscc/pubs/winstat.htm).
  2. Download Stata free of charge via the campus software library.
  3. Stata is available in the La Follette computer lab and other labs on campus.

**LEARNING OUTCOMES**

**Course Learning Outcomes**
Students will be able to…

- Use basic numeric and visualization tools to describe data.
- Use statistical inference to answer policy relevant research questions.
- Analyze and interpret the relationship between two or more variables.
- Use statistical computing software to conduct statistical analysis of data.
- Evaluate the methodology and conclusions of statistical policy analyses.

**HOMEWORK ASSIGNMENTS**

Students are responsible for the completion of near-weekly problem sets. The problem sets vary in their content depending on the section of the course we are in. Some require you to analyze data to answer a policy-related question and present your results. Others are more traditional ‘problem sets’.

These problem sets will be graded using a check+, check, check- grading scale. Students are encouraged to work in groups on problem sets, but each student must turn their own work. Under no circumstance will late homework be accepted. The problem sets will account for 30 percent of the grade and are intended to provide intensive practice in applying the tools developed in lecture. You should look at homework as an opportunity to make some mistakes and learn from them. My expectation is that you put time and effort into completing assignments, but I do not expect that completed assignments will be perfect and error free.

**QUIZ AND EXAMS**

There is a quiz, a midterm exam, and a final. The midterm is scheduled for during regular class time. The quiz can be taken at any time over a 3.5 day period on Canvas. Once started there is a limited period of time available to finish it. The final is scheduled according to the university’s final exam schedule. The midterm covers approximately the first half the course. The quiz covers probability. The final is cumulative.

**ARTICLES AND DISCUSSIONS**
While this class is oriented toward developing tools, we are developing tools for policy. During the semester each student should post one (or more) current article(s) in the “discussions” section on canvas.
that uses statistical methods and/or data applied to a policy topic they are interested in. Each student should comment on four of their fellow classmates articles over course of the semester.

GRADING
Final grades will be determined with this weighting:
- Homework assignments – 25%
- Articles and Discussions – 5%
- Midterm Exam - 20%
- Quiz – 15%
- Final Exam - 25%
- Participation – 10%

If you have any questions or concerns about how your assignment or exams are graded please send an email to Sakina Shibuya (sshibuya2@wisc.edu) detailing your concerns.

DISCUSSION SECTIONS
All students enrolled in this class should be assigned to a discussion section with a teaching assistant. These discussion sections will meet once a week throughout the course of the semester. In discussion sections, the problem sets from the previous week will be reviewed, old material may be rehashed, questions will be answered, and, on occasion, new material will be presented. To get the most out of the course attendance and active participation in these discussion sections will be vital.

Course Policies

This 3 CR course has two 75 min lectures per week and one 50 min discussion section. Students are expected to work approximately 6 hours per week outside of class to complete assignments and learn the relevant material.

PARTICIPATION EXPECTATIONS
Students are expected to attend all lectures and discussions sessions.

LATE WORK POLICY
Under no circumstance will late homework be accepted.

University of Wisconsin-Madison Policies

RULES, RIGHTS & RESPONSIBILITIES
- See: https://guide.wisc.edu/undergraduate/#rulesrightsandresponsibilities

ACADEMIC CALENDAR & RELIGIOUS OBSERVANCES
- See: https://secfac.wisc.edu/academic-calendar/#religious-observances

ACADEMIC INTEGRITY
By virtue of enrollment, each student agrees to uphold the high academic standards of the University of Wisconsin-Madison; academic misconduct is behavior that negatively impacts the integrity of the institution. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these previously listed acts are examples of misconduct which may result in disciplinary action. Examples of disciplinary action include, but is not limited to, failure on the assignment/course, written reprimand, disciplinary probation, suspension, or expulsion. (Source: https://conduct.students.wisc.edu/syllabus-statement/)
ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES
The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared faculty and student responsibility. Students are expected to inform faculty [me] of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. Faculty [I], will work either directly with the student [you] or in coordination with the McBurney Center to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA. (Source: https://mcburney.wisc.edu/instructor/)

DIVERSITY & INCLUSION
Diversity is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals.

The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world. (Source: https://diversity.wisc.edu/)

Usage of Audio Recorded Lectures Statement
Lecture materials and recordings for PA818 are protected intellectual property at UW-Madison. Students in this course may use the materials and recordings for their personal use related to participation in this class. Students may also take notes solely for their personal use. If a lecture is not already recorded, you are not authorized to record my lectures without my permission unless you are considered by the university to be a qualified student with a disability requiring accommodation. [Regent Policy Document 4-1] Students may not copy or have lecture materials and recordings outside of class, including posting on internet sites or selling to commercial entities. Students are also prohibited from providing or selling their personal notes to anyone else or being paid for taking notes by any person or commercial firm without the instructor’s express written permission. Unauthorized use of these copyrighted lecture materials and recordings constitutes copyright infringement and may be addressed under the university’s policies, UWS Chapters 14 and 17, governing student academic and non-academic misconduct.
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