

Midwestern State University
Department of Political Science

POLS 3213: RESEARCH METHODS

SPRING 2021

Section 201: TR 12:30pm – 1:50 pm (PY-102/ OD-126)

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COURSE DESCRIPTION

The purpose of this course is to prepare students to analyze political science issues using statistics. The main topics and methods covered in this course include descriptive statistics, basic probability, hypothesis testing, differences-between-groups tests, correlation, linear regression, and multiple regressions. We also examine how to generate and interpret statistical analyses through Microsoft Excel and SPSS software. By the conclusion of the course students should be able to pose specific research questions, construct a valid and reliable research design, gather empirical data, and confirm or reject their hypotheses. This course will provide students with skills that can be extended beyond the scope of this course and into their professional life after graduation from MSU.

This course begins at an elementary level, assuming no prior knowledge of statistics, and ends with advanced techniques for running and interpreting multivariate analysis. Students will be given the opportunity to progress rapidly in their familiarity with a variety of quantitative methods for describing distributions and for analyzing the nature, significance, and strength of relationships between variables.

Completing ALL the readings and regular attendance will be required of all students. Active participation in class discussions is very important for students to succeed in this course. Students should make special efforts to arrive on time. They should inform the instructor ahead of time if they need to be late or leave before the class ends. Attendance is mandatory and will be taken at every class. Unexcused absences will result in a lowering of final grade.

Note: The syllabus provides a general plan for the course, and changes may be necessary. Changes in the course syllabus, procedure, assignments, and schedule may be made at the discretion of the instructor over the course of the semester. Any changes made will be announced in class and posted on D2L.

COURSE REQUIREMENTS

Completing ALL the readings and regular attendance will be required of all students. Active participation in discussions is critical for students to succeed in this course.

Assignment	Weight	Note
Midterm exam	30%	Computer Lab (open book)
Final project	30%	Detailed guidelines will be provided
Weekly assignment	30%	10 assignments (3 points each)
Attendance & participation	10%	attending office hours; bringing paper drafts; asking questions in class; and presenting your final project

- 1. Exam (30%):** There will be a midterm examination. The exam will be administered in the computer lab (OD 126) and open notes when it comes to statistical formulas; therefore, it is important for students to take excellent notes and complete all weekly assignments. The exam will require students to do arithmetic calculations using Microsoft Excel and make and interpret SPSS outputs.
- 2. Final Project (30%):** A final project will be assigned to wrap up the course. Students create a research hypothesis, find data, compile a dataset, and test their hypothesis using SPSS. More details will be provided later in the semester.
- 3. Weekly Assignment (30%):** Homework assignments will be based on exercises from the textbook. All assignments and due dates will be announced in advance. Since homework will often be reviewed in class on the day when they are due, late assignments will be penalized 50%.
- 4. Engagement with the course (10 %):** Your attendance and participation are vital to learning the material presented in this course. Without any change of university-wide COVID-19 policy, you will be expected to come to class prepared to engage thoughtfully, listen attentively, and interact with your peers respectfully. However, please do not come to class if you are feeling sick or you think you might have been exposed to COVID-19. Contact me (via email) and provide details about your situation at your earliest convenience for your absence to be excused. Over the course of the semester, 4 excused absences will be allowed for all students. More than 4 absences and unexcused absences may lower your final grade.

Final grade will be based on the quality of assignments listed above. It will be determined using the following percentage scale:

A = 100 – 90 B = 89 – 80 C = 79 – 70 D = 69 – 60 F < 60

Desire-to-Learn (D2L)

All of the material for this course is located on the MSU D2L platform. Each student is expected to be familiar with this platform as it provides a primary source of communication regarding assignments, examination materials, and general course information. You can log into D2L through the MSU Homepage. If you experience difficulties, please contact the technicians listed for the program or contact your instructor. DO NOT WAIT UNTIL THE LAST MINUTE TO TAKE QUIZZES OR EXAMS.

On Academic Honesty

Cheating, collusion, and plagiarism (the act of using source material of other persons, either published or unpublished, without following the accepted techniques of crediting, or the submission for credit of work not the individuals to whom credit is given) are not allowed in this course. Additional guidelines on procedures in these matters may be found in the [Office of Student Conduct](#).

Student Disability Services

Any student having an education disability plan on file with the university needs to inform me within the first week of the class, so I make the appropriate arrangements to accommodate your situation. In accordance with Section 504 of the Federal Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, Midwestern State University endeavors to make reasonable accommodations to ensure equal opportunity for qualified persons with disabilities to participate in all educational, social, and recreational programs and activities. After notification of acceptance, students requiring accommodations should make application for such assistance through Disability Support Services, located in the Clark Student Center, Room 168, (940) 397-4140. Current documentation of a disability will be required in order to provide appropriate services, and each request will be individually reviewed. For more details, please go to Disability Support Services.

On Electronics and Courtesy

All electronic messaging devices must be turned off and stowed away by the time class begins: no e-mail/Facebook/text message checking, net surfing, etc. during class time. The use of laptops and tablets is prohibited in class except when explicitly permitted by the instructor. Out of courtesy to your classmates and your instructor, please come to class on time and do not leave until the class ends, unless you obtained prior permission, and do not engage in private conversations in class.

Textbooks

Theresa Marchant-Shapiro, *Statistics for Political Analysis: Understanding the Numbers* (Sage Publications, 2015).

Required Software:

- Microsoft Excel
- SPSS

Week	Date	Topic	Reading	Assignment
1	Jan 12	Course introduction		Assignment #1 YT 1.1-2 (p.15)
	Jan 14	The Political use of numbers <ul style="list-style-type: none"> Variables/statistical methods 	Ch. 1	Due: Jan 17 (11:30pm)
2	Jan 19	Measurement <ul style="list-style-type: none"> Level of measurement (Excel) Computer Lab (Group A) 	Ch. 2	Assignment #2 YT 2.1-3 (p.48-9)
	Jan 21	Measurement <ul style="list-style-type: none"> Level of measurement (Excel) Computer Lab (Group B) 	Ch. 2	Due: Jan 24 (11:30pm)
3	Jan 26	Central Tendency <ul style="list-style-type: none"> Mean/Median/Mode (Excel) Computer Lab (Group A) 	Ch. 3	Assignment #3 YT 3.1-2 (p.72-3)
	Jan 28	Central Tendency <ul style="list-style-type: none"> Descriptive Statistics (Excel/SPSS) Computer Lab (Group B) 	Ch. 3	Due: Jan 31 (11:30pm)
4	Feb 2	Measures of Dispersion <ul style="list-style-type: none"> Standard Deviation/Variance (Excel) Computer Lab (Group A) 	Ch. 4	Assignment #4 YT 4.1-3 (p.106-8)
	Feb 4	Measures of Dispersion <ul style="list-style-type: none"> Standard Deviation/Variance (Excel/SPSS) Transforming Variables (SPSS) Computer Lab (Group B) 	Ch. 4	Due: Feb 7 (11:30pm)
5	Feb 9	Continuous Probability <ul style="list-style-type: none"> Normal curve/Z-scores (Excel) Computer Lab (Group A) 	Ch. 5	Assignment #5 YT 5.1-2 (p. 142-3)
	Feb 11	Continuous Probability <ul style="list-style-type: none"> Normal curve/Z-scores (Excel/SPSS) Computer Lab (Group B) 	Ch. 5	Due: Feb 14 (11:30pm)
6	Feb 16	Means Testing <ul style="list-style-type: none"> Errors/ t-test/Confidence Intervals (Excel) Computer Lab (Group A) 	Ch. 6	Assignment #6 YT 6.1 (p. 176-7)
	Feb 18	Means Testing <ul style="list-style-type: none"> Errors/ t-test/Confidence Intervals (SPSS) Computer Lab (Group B) 	Ch. 6	Due: Feb 21 (11:30pm)

7	Feb 23	Hypothesis Testing <ul style="list-style-type: none"> ANOVA (Excel) Computer Lab (Group A) 	Ch. 7	Assignment #7 YT 7.1-2 (P.242-3)
	Feb 25	Hypothesis Testing <ul style="list-style-type: none"> ANOVA (Excel) Computer Lab (Group B) 	Ch. 7	Due: Feb 28 (11:30pm)
8	Mar 2	Midterm: Group A		
	Mar 4	Midterm: Group B		
9	Mar 9	Chi-Square and Cramer's V (Excel/SPSS) <ul style="list-style-type: none"> Computer Lab (Group A) 	Ch. 8-9	Assignment #8 YT 9.1 (p.270-1)
	Mar 11	Chi-Square and Cramer's V (Excel/SPSS) <ul style="list-style-type: none"> Computer Lab (Group B) 	Ch. 8-9	Due: Mar 14 (11:30pm)
10	Mar 16	Measures of Association and Correlation (Excel/SPSS) <ul style="list-style-type: none"> Computer Lab (Group A) 	Ch. 10	Assignment #9 Final Project Proposal
	Mar 18	Measures of Association and Correlation (Excel/SPSS) <ul style="list-style-type: none"> Computer Lab (Group B) 	Ch. 10	Due: Mar 21 (11:30pm)
11	Mar 23	Bivariate Regression (Excel) <ul style="list-style-type: none"> Computer Lab (Group A) 	Ch. 12	Assignment #10 YT 12.1-3 (p. 371-2)
	Mar 25	Bivariate Regression (Excel) <ul style="list-style-type: none"> Computer Lab (Group B) 	Ch. 12	Due: Mar 28 (11:30pm)
12	Mar 30	Data Collection and Discussion		
	Apr 1	Holiday Break	No class	
13	Apr 6	Multivariate Regression (SPSS)	Ch. 13	Final Project Draft Submission 1
	Apr 8	Multivariate Regression (SPSS) Pivot Table (Excel) <ul style="list-style-type: none"> Computer Lab (Group A) 	Ch. 13	(No grade)
14	Apr 13	Multivariate Regression (SPSS) <ul style="list-style-type: none"> Computer Lab (Group B) 	Ch. 13	Final Project Draft Submission 2
	Apr 15	Conference Participation (Midwestern Political Science Association)	No class	(No grade)
15	Apr 20	Final Project Presentation/Discussion		Final Project Submission
	Apr 22	Final Project Presentation/ Discussion		(April 25)