Applied Research Methods

POL 306
Harrison Hall 002
Mon & Wed 2:50 pm – 4:10 pm

Instructor:	Dr. Kevin Reuning (ROY-ning)
Email:	reunink@miamioh.edu
Course Website:	Canvas
Office:	Harrison Hall 222
Office Hours:	Monday: 11 am – 12 pm
	Thursday: 11am – 2 pm

Course Description:

In this course we will learn how quantitative analysis can be used to test social science theories and analyze public policy. This will require covering both theoretical questions as well as directly applying what we learn using R, a common statistical software. By the end of the term students will be able to understand quantitative analysis done by others as well as implement their own.

Student Learning Objectives:

1. Students will be able to define and explain statistical concepts used in the analysis of political phenomenon.

2. Students will demonstrate skill in evidence-based reasoning by identifying the appropriate research design and data for a given research question.

3. Students will be able to identify and apply the appropriate statistical methodology and analysis for a given problem and understand the limitations of their research choices.

4. Students will be able to apply statistical methodologies to contemporary political issues and problems and be able to identify and evaluate alternative political science-based solutions.

5. Students will be able to evaluate the possibilities for positive change in democratic society as engaged researchers.

Required Book:

Bergman, Evan and Xiaohu Wang. 2017. *Essential Statistics for Public Managers & Policy Analysts.* ISBN: 9781506364315

For those that want more help using R, *Political analysis using R* by James E. Monogan III is available online through the Miami library: https://link-springer-com.proxy.lib.miamioh.edu/book/10.1007%2F978-3-319-23446-5

Course Policies:

Respect: In this course we will learning how to test social scientific theories and evaluate public policy. At times this will require discussing issues that touch many of us personally. In these discussions our aim is to understand what the evidence implies about the world. In these discussions we will treat everyone with respect.

Preparation: This course builds on itself and so students need to come to class everyday ready and willing to learn. Most weeks we will spend one day in a lecture and another day working on assignments. On working days students are expected to bring a laptop and be prepared to actively engage in the assignment.

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Readings are expected to be done prior to Monday's class.

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Technology: In the class you are expected to be focused on what is going on within the class. Laptops will be required on some days. On those days that laptops are not required you may bring one to take notes, etc. If the laptop becomes a distraction to those around you we will look at reevaluating this policy.

Email Policy: I will check email between 8am and 6pm, and will try to always respond to any contact within 24 hours. Although I do not expect formality in email communications, I do expect you to respect that emails are not a costless act.

Grade Distribution and Assignments:

Item	Percentage
Attendance	5%
Regular Assignments	30%
Final Project Memo	15%
Midterm	25%
Final	25%

Attendance: You are expected to come to class. You are given 2 unexcused absences without loss of credit. Additional unexcused absences will lead to lost points:

- 0-2 unexcused absences: 5%

- 3 unexcused absences: 4%

- 4 unexcused absences: 3%

- 5 unexcused absences: 2%

- 6 unexcused absences: 1%

- 7 or more unexcused absences: 0%

In addition, you will still be expected to complete any assignments that you missed. These will be due one week after you return to class. You will be expected to contact me in order to get access to any missed assignments. Not completing a missed assignment because you were unaware of it is not an excuse.

Excused absences: In accordance with Miami University policy (https://blogs.miamioh.edu/miamipolicies/?p=2046), I must be notified in writing prior to any excused absence. These will not count against your unexcused absences. You will still be expected to complete any in-class assignments. As for unexcused absences you must contact me to received the assignment and they are due one week after your return to class.

Assignments and Final Project Memo: Throughout the semester we will work on assignments using datasets I have provided. These assignments will require applying concepts and methods we learned in class to test a theory you develop based on the variables in the dataset. These assignments will be turned in regularly and you will receive grade and feed back on them. The grades from these assignments will make up 30% of your grade. You should expect to be turning in an assignment every Monday.

At the end of the class you will aggregate the assignments together into a memo. This memo will pose a testable hypothesis, describe three variables that you use, test your theory, and then provide a discussion of your results with limitations. For those of you that preform well on the assignments during the class this final project will be relatively simple as you will just have to put the pieces together. In all cases you will have a chance to rework the assignments before putting them together in order to get maximum credit.

A more details description of what is in the final project is on the Canvas website. Note, not all class assignments will be part of the final project.

Midterm: The midterm will take place on Wednesday, October 17th. We will discuss the format of the midterm as we approach it.

Final: The final will take place on Wednesday, December 12th. We will discuss the format of the midterm as we approach it.

Extra Credit: I will provide several extra credit opportunities throughout the semester and will announce them in class and on Canvas.

Late work policy: In order to receive a deadline extension you should contact me more than 24 hours before the deadline. If an assignment is turned in late without an extension but within 24 hours of the due date, your grade will decrease by 5 percentage points (a 95% would become a 90%). For every additional 24 hours after this it loses another 5%.

Letter Grade Distribution:

>= 93.00	A	73.00 - 76.99	C
90.00 - 92.99	A-	70.00 - 72.99	C-
87.00 - 89.99	B+	67.00 - 69.99	D+
83.00 - 86.99	B	63.00 - 67.99	D
80.00 - 82.99	B-	60.00 - 62.99	D-
77.00 - 79.99	C+	<59.99	F

Academic Integrity:
Miami University is a scholarly community whose members believe that excellence in education is

grounded in qualities of character as well as of intellect. We respect the dignity of other persons, the rights and property of others, and the right of others to hold and express disparate beliefs. We believe in honesty, integrity, and the importance of moral conduct. We defend the freedom of inquiry that is the heart of learning and combine that freedom with the exercise of judgment and the acceptance of personal responsibility.

Miami demands the highest standards of professional conduct from its students, faculty, and staff. As a community of scholars, our fundamental purpose is the pursuit of knowledge. Integrity in research and creative activities and in academic study is based on sound disciplinary practices and expectations, as well as a commitment to the values of honesty and integrity.

Any student caught committing academic dishonesty will, at a minimum, receive a 0 for the assignment at hand. For more information on academic dishonesty and potential punishments visit http://MiamiOH.edu/integrity.

Disability Services:
If you are a student with a physical, learning, medical and/or psychiatric disability and feel that you may need a reasonable accommodation to fulfill the essential functions of the course that are listed in this syllabus, you are encouraged to contact the Office of Student Disability Services at 529-1541 (V/TTY), located in the Shriver Center, Room 304.

Course Outline:

Week of August 27: Research Questions, Theories and Hypothesis

How does research start?

http://www.socialresearchmethods.net/kb/resques.php

http://www.socialresearchmethods.net/kb/relation.php

Week of September 3: Validity

No class on Monday

What should we be concerned about when we are doing research?

http://www.socialresearchmethods.net/kb/external.php

http://www.socialresearchmethods.net/kb/measval.php

http://www.socialresearchmethods.net/kb/intval.php

Week of September 10: Unit of Analysis and Sampling

Who or what are we researching?

http://www.socialresearchmethods.net/kb/unitanal.php

http://www.socialresearchmethods.net/kb/sampterm.php

Week of September 17: Variables

How are we quantifying the world?

http://www.socialresearchmethods.net/kb/variable.php

`http://www.socialresearchmethods.net/kb/measlevl.php`

Week of September 24: Univariate Statistics

How do we describe a phenomenon
Chapters 6, 7 and 8

Week of October 1: Hypothesis Testing

Is our hypothesis right?
Chapter 10

Week of October 8: Hypothesis Testing

Is our hypothesis right?
Chapter 10

Week of October 15: Review and Midterm

Monday: Review
Wednesday: Midterm

Week of October 22: Chi-Squared

Chapter 11

Week of October 29: T-Tests

Are these two groups different?
Chapter 12

Week of November 5: Correlations

Are these two things related?
Chapter 14

Week of November 12: Regression

Are these two things related if we consider something else?
NO MONDAY CLASS Read: Caliskan, Aylin, Joanna J. Bryson, and Arvind Narayanan. 2017. "Semantics derived automatically from language corpora contain human-like bases." *Science* 356:183-186.
Chapter 15

Week of November 19: More Regression

No Class on Wednesday
Pick one of the following to read

- Branton, Regina and Ronald J. McGauvran. 2018. "Mary Jane Rocks the Vote: The Impact of Climate Context on Support for Cannabis Initiatives." *Politics and Policy* 46(2):209-232.

- Bucci, Laura C. 2018. "Organized Labor's Check on Rising Economic Inequality in the U.S. States." *State Politics and Policy Quarterly* 18(2):148-173.

- Kertzer, Joshua D. and Thomas Zeitzoff. 2017. "A Bottom-Up Theory of Public Opinion about Foreign Policy." *American Journal of Political Science* 61(3):543-558.

- Kuhlmann, Robynn and Daniel C. Lewis. 2017. "Legislative Term Limits and Voter Turnout." *State Politics and Policy Quarterly* 17(4):372-392.

- Urbatsch, R. 2017. "Youthful hours: Shifting poll-opening times manipulates voter demographics." *Research and Politics* 4(3):1-7.

Week of November 26: Logistic Regression

Yea. . . my dependent variable isn't continuous

First half of Chapter 15 (273 to 279)

Week of December 3: Review and Work Week

Project Memo due by Midnight on December 5th

Wednesday December 12: Final Exam

3 to 5 pm

Additional Resources

- Howe Writing Center: http://miamioh.edu/hcwe

- Students also may occasionally have personal issues that arise in the course of pursuing higher education or that may interfere with their academic performance. If you find yourself facing problems affecting your coursework, you are encouraged to call Student Counseling Service (513-529-4634). For emergencies outside of business hours, the Community and Counseling and Crisis Center (844-427-4747) has a 24-hour hotline.

- Students come to Miami from a variety of economic backgrounds. If you are having financial trouble I urge you to make use of the services available through Miami Cares Resources: http://miamioh.edu/emss/offices/student-success-center/student-resources/index.html (under the Emergency Needs tab)