

# Research Methods in Political Science and Health

POLS/HEAL 201-01 // Fall 2021 // Morse-Ingersoll 107 //  
MW 10:15 AM – 12:05 PM // Professor Philip Chen // [chenp@beloit.edu](mailto:chenp@beloit.edu) //  
Office: Morse-Ingersoll 111 // Office Hours: Tuesdays, 10:00 – 11:30 AM

*NOTE: We do not meet as a class on Fridays. The computer lab will be available for you, but we will not meet as a class during this time.*

## **Course Description**

This course offers an overview of research methods used in health and political science research. Course objectives will include an introduction to basic statistical concepts and research design; the course will also emphasize the use of STATA statistical software for production of various statistical output (ANOVA, odds ratios, bivariate and multivariate regression analyses). Prerequisite: None, but POLS 110 or higher recommended. Please note: Depending on software availability, students may be required to purchase a 6-month license to Stata, which costs approximately \$45.

## **Course Objectives**

By the end of this semester, you should be able to:

- Understand and apply basic statistical concepts to the study of political science and/or health
- Analyze data and communicate findings in written and oral formats
- Identify the proper statistical analysis for a set of data and run that analysis using Stata

## **Structure of the Class**

This class follows a slightly different format than many classes you might take at Beloit. There will be some lecture or guided discussion on the various topics, which is necessary to make sure everybody is familiar with the statistical concepts covered in the class. However, do not expect this to be a class built largely around lecture. This is primarily a function of the type of learning I am expecting from students in this class. I don't expect you to memorize statistical formulae or know how to calculate statistics by hand. What I want you to leave this class with is an understanding of where to look for information and how to apply it.

Therefore, the course outcomes are practical. How do you write a literature review? Where and how do you find good academic sources? How do you run a regression analysis in Stata? How do you interpret the results of that analysis? These are skills best gained through practice and repetition. Thus, large portions of the class are devoted to you practicing the skills and techniques we talk about. This may take the form of small group work, individual lab time, or large group discussions. Because of this, please come to class prepared to discuss the day's readings and bring copies of the readings, either in electronic or paper form, as this is a key component of the course. If you don't understand part of a reading, that's ok! Just come prepared to ask a question about that reading.

## Office Hours and Help

I strive to make this course understandable and accessible for all students. If you have any questions about the content or structure of the course or about specific assignments, please do not hesitate to contact me. I am always happy to help if you come to me before assignments or exams are due. Please do not wait to ask for help until after the due date, come talk to me before if you are struggling.

## Required Texts

This class will feature a mix of academic books and articles. The required books are listed below and are available at the college bookstore or from Amazon or other places online. Additional readings are available on the class Moodle site at:

<https://moodle.beloit.edu/course/view.php?id=279>

There is one required book for the course:

Pollock III, Philip H. (2018). *A Stata Companion to Political Analysis. Fourth Edition.*

In addition, for those who want an introductory statistics book, I highly recommend the following Open Access book. You'll notice that there is no official statistics textbook assigned for this class. I will draw from a variety of political science research textbooks for readings. If you want to learn the background statistics in more detail, I refer you to:

[https://www.openintro.org/stat/textbook.php?stat\\_book=os](https://www.openintro.org/stat/textbook.php?stat_book=os)

## Grading

Grades are based on four different components, described in more detail below. 40% of your grade will come from the final research paper that you will develop over the semester (1). An additional 25% of your grade will come from completing homework assignments with Stata (2). 10% of your grade consists of attendance and participation in class (3). Finally, 25% of your grade consists of weekly reading quizzes (4).

|                                 |     |                     |
|---------------------------------|-----|---------------------|
| Reading Quizzes (Top 6)         | 25% |                     |
| Homework Assignments            | 25% |                     |
| Final Research Paper            | 40% |                     |
| Research Ideas                  |     | Required (No Grade) |
| Research Question and Variables |     | Required (No Grade) |
| Literature Review               |     | Required (No Grade) |
| Hypotheses, Data, and Methods   |     | Required (No Grade) |
| Results                         |     | Required (No Grade) |
| First Draft                     |     | Required (No Grade) |
| Paper Conference                |     | Required (No Grade) |
| Participation & Attendance      | 10% |                     |

**Weekly Reading Quizzes (25%)** – Over the past couple years, I've come to dislike the concept of midterm and final exams because they place a premium on memorization and intense study

rather than a cohesive synthesis of the material we read. In essence, finals and midterms seem to encourage students to memorize minutiae instead of substance.

However, the readings for this class were chosen with intention and I believe they are important for students to get the most out of the class. While I will sometimes lecture on the readings, the reading quizzes will focus both on things we cover in class as well as things that are only located in the readings.

While I would love to be able to simply ask “did you do the reading?” and grade you on this, it seems unrealistic. On Wednesdays of most weeks we will have a short, graded, **open hard copy note** reading quiz. You are welcome to use both class and reading notes, but you **must have hard copies** of those notes. You will not be allowed to use your phone or computer to access your notes during the quizzes, but you may print off your notes prior to class. These quizzes will consist of a few multiple choice or short answer questions, as well as one or two longer (2-3 paragraph) questions that ask you to synthesize the readings in some way. When we get into the statistics, they may include simple calculations, but you will not be expected to memorize formulae (I’ll give you information you need) and calculators, if needed, will be provided.

I understand that sometimes things come up and readings don’t get done. Over the course of the semester, there are 7 Wednesdays when I will administer quizzes. Out of these 7 quizzes, I will drop your lowest score. The remaining 6 quizzes will be worth 25% of your grade. While no one quiz will make or break your final grade, failing to do any of the readings will severely limit your potential in this class.

At the end of the semester, I will simply take your highest 6 quiz grades (dropping the lowest grade) and average them. Because you have a quiz that is not counted, you cannot make up quizzes for unexcused absences. However, if you are going to miss a quiz and let me know ahead of time, we can make arrangements for you to take the quiz at a different time. If you are sick or have an approved absence, just make sure to send me an email or talk to me so you can schedule a time to make up the quiz.

**Homework Assignments (25%)** – A major component of this course is learning to apply the statistical techniques using a computer program called Stata. To help with this, you will complete a variety of homework assignments. These will be a combination of work from the assigned textbook and questions that I wrote. You will need to turn in the hard copy of each completed homework assignment on the due date.

Now here’s a bit of truth about research methods and Stata: The program takes a while to get comfortable with and the only way to do this is to sit at the computer and try things. I will give you time during class as a lab to work on the assignments, but you will also likely need to spend additional time in the lab to finish the work. And here’s another thing: research rarely occurs as a single individual in isolation. What this means is that I encourage you to talk with your classmates and work through problems together if you are confused or having problems.

Because these assignments build off of each other, I have them grouped into multiple due dates throughout the semester. This means if you are stuck on something, you should have a little extra time to work, and if you understand something well, you can work ahead and have more free time later in the semester.

**Final Research Paper (40%)** – For this course, the major component of your grade is an original quantitative research paper that uses the data analysis skills that you learn throughout the semester. As the semester progresses, you will select a research question, write a *short* literature review, develop hypotheses, test those hypotheses, and write up your results.

This is not an easy assignment, and it is likely a format that you have not written extensively before. That’s ok! Struggling with this assignment is normal, but it is a key component of growing as a college student in the social sciences. However, this is most definitely NOT an assignment that you should wait until the last minute to write. This will be incredibly stressful and result in a very poor paper. Writing with data is difficult, but you will be a better writer and student after practicing these skills.

While the individual pieces of the paper are due at different times throughout the semester, you are graded on the final, edited draft that you put together. You’ll notice that the individual pieces of the paper are marked “Required (No Grade).” These can be thought of as low stakes requirements that give me a chance to give feedback for revisions. In order to receive full credit on your paper, you must turn in all of these components, even though your performance on these assignments does not factor into your final paper grade. Failing to turn in these assignments will lower your final paper grade by 1/3 of a letter grade for each missing piece. For instance, if your grade for the entire paper was a B+, but you failed to turn in your research ideas, your final grade would be a B. If you were missing both the research ideas and literature review, your B+ would become a B-.

**Participation and Attendance (10%)** – The participation portion of your grade includes regular attendance in class, completion of in-class activities, participation in class discussions, and asking questions during class.

Half of this grade is based purely off of attendance. I will hand out a sheet for everyone to sign in at the start of class. If you are late to class, please check with me after class to make sure I’ve recorded your attendance for the day. There are 24 days in the semester that we will meet as a class, and I will use the following scale to determine your attendance grade:

|    |                     |
|----|---------------------|
| A  | 0 – 1 absences      |
| A- | 2 – 3 absences      |
| B+ | 4 absences          |
| B  | 5 absences          |
| B- | 6 absences          |
| C+ | 7 absences          |
| C  | 8 absences          |
| C- | 9 absences          |
| D+ | 10 absences         |
| D  | 11 absences         |
| F  | 12 or more absences |

NOTE: This count does NOT include excused absences. If you miss class because of an approved college activity, illness, or prior arrangement with me, this will not count against your attendance grade. But you do need to let me know!

The other half of this grade is based on in-class participation. I'll advise you that I take the participation portion of the class seriously. I give very few A grades for participation. Thus, you shouldn't assume that simply attending class regularly is enough to get full participation. I grade participation holistically. If you are attentive in class, offer opinions and reactions to readings, and are engaged in discussion, you will do fine. But these are not simply "free" points for the class.

**Extra Credit Poster and Presentation** – In addition to the ability to write well, a key component of good social science methodology is being able to present the results visually and verbally. As part of this, the last full week of class is devoted to mock poster sessions, fashioned after real academic conferences. *You are not required to do this, but I highly recommend it!* If you successfully complete a poster presentation, I'll increase your final grade in the course by 3%. For example, if you're final grade was a 90 (an A-), completing the poster and presentation would raise your grade to a 93 (an A). This assignment requires you to design a poster that showcases the highlights of your research. In addition, you will give a short presentation of your results to the class and the class will have a chance to ask you questions about your research. Do not stress too much about this, poster presentations are informal and, at the end of the semester, this is a great opportunity to celebrate all of the hard work that you did throughout the semester.

**Grade Scale:**

|    |        |    |       |
|----|--------|----|-------|
| A  | 93-100 | C  | 73-76 |
| A- | 90-92  | C- | 70-72 |
| B+ | 87-89  | D+ | 67-69 |
| B  | 83-86  | D  | 63-66 |
| B- | 80-82  | D- | 60-62 |
| C+ | 77-79  | F  | <60   |

**Grading** – On some assignments, you may receive a grade of B+/A- or something like that. This is just my shorthand way of assigning a number grade between two letter grades. Thus, an A grade is recorded in the grade book as 100 points while an A- grade is recorded as 92 points. If I think your work fell between these points, you may get an A-/A, which would be recorded as 96 points. So a A-/A is technically an A grade, but in the middle of the A range instead of the high end.

When calculating final grades, I always round up. So an 88.7% in the class becomes an 89% (B+), but an 89.1% would be rounded up to a 90% (A-).

**Course Schedule:**  
**Days with reading quizzes marked with (RQ)**

Introduction to Research and Design

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|                  |   |
|------------------|---|
| August 23        | First Class – No Readings                                   |
| August 25        | Political Science (MUTT)*<br>Research Design (MUTT)*        |
| August 30        | Shively Ch 1*<br>Shively Ch 2*                              |
| September 1 (RQ) | Baglione Ch 3*  |
| September 6      | NO CLASS (Labor Day)  |
| September 8      | Lupia 2000*<br>Baglione Ch 4*<br><b>DUE: Research Ideas</b> |

Variables: What are we looking at and what do they tell us

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|                   |   |
|-------------------|---|
| September 13      | Levels of Measurement (MUTT)*<br>Johnson & Reynolds Ch 4*<br>Pollock Ch 1 |
| September 15 (RQ) | Jaisingh Ch 2*<br>Pollock Ch 2  |
| September 20      | Jaisingh Ch 3*<br>Pollock Ch 3  |
| September 22      | Work Day<br><b>DUE: Research Question and Variables</b>                   |

Getting Complex: Comparing and controlling for other factors

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|                   |  |
|-------------------|--|
| September 27      | Johnson & Reynolds Ch 4 (Review)*<br>Varieties of Data (MUTT)*<br>Pollock Textbook Ch 4*<br>Pollock Ch 4 |
| September 29 (RQ) | Pollock Textbook Ch 5*<br>Pollock Ch 5<br><b>DUE: Homework #1, #2, &amp; #3</b>                          |

October 4                      Work Day

October 6                      Pollock Textbook Ch 6\*  
Pollock Ch 6  
**DUE: Homework #4 & #5**

October 11                     FALL BREAK

October 13                     FALL BREAK

October 18                     Baglione Ch 5\*  
Pollock Textbook Ch 7\*  
Pollock Ch 7

Time to Regress: Accounting for multiple factors at once

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October 20 (RQ)                Work Day  
**DUE: Literature Review**

October 25                      Johnson & Reynolds Ch 13\*  
Johnson & Reynolds pg. 527 – 568\*  
Pollock Ch 8

October 27 (RQ)                Pollock Ch 9  
**DUE: Homework #6 & #7**

November 1                     Johnson & Reynolds pg. 568 – 593\*  
Pollock Ch 10

November 3                     NO CLASS (Beloit and Beyond Conference)  
**DUE: Hypotheses, Data, and Methods**

November 8                     Work Day  
Johnson & Reynolds pg. 527 – 568 (Review)\*  
Pollock Textbook Ch 7 (Review)\*

Where Data Comes From

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November 10 (RQ)              Work Day (Final Paper)  
Baglione Ch 8\*  
**DUE: Homework #8, #9, & #10**

November 15                     Work Day (Final Paper)  
Rothschild & Malhotra 2014\*  
Brady et al 2001\*

November 17 (RQ)              Work Day (Final Paper)

**RESULTS AND FIRST DRAFT DUE BY SUNDAY, NOVEMBER 21 @ 12:00 PM (NOON)**

Finishing the Semester Strong

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|             |  |
|-------------|--|
| November 22 | No Class – Paper Conferences           |
| November 24 | No Class – Thanksgiving                |
| November 29 | Poster Presentations                   |
| December 1  | Poster Presentations/Last Day of Class |
| December 7  | <b>Final Draft Due by 12 pm (Noon)</b> |



Attendance: Regular attendance is vital for your success in this course. I understand, however, that sometimes circumstances prevent you from coming to class. Missing one class will not destroy your grade; missing several will.

Grade Changes: Any appeals of a grade must be made at least **24 hours after** I hand back an assignment or exam. If you would like to appeal the grade you got on an assignment, prior to meeting with me you must submit a written statement detailing why you think your grade should be changed. I will then meet with you to discuss your statement and why you think your grade should be changed.

If I make a mistake in totaling your grade for an exam or assignment (e.g. I added the points up incorrectly) then you do not need to write a statement or wait 24 hours. Just talk to me after class or during office hours and I'll double check and fix the mistake.

Contacting the Professor: I encourage you to contact me with questions and concerns about the course, readings, and assignments. In general, quick clarification questions can be handled over email. More in-depth questions are best discussed in person during my office hours, where we can have an actual conversation. If my office hours conflict with your class or work schedule, I am available by appointment as well.

Please allow a full 24 hours for an email response. Often, my responses will be quicker than this, but do not send multiple emails about the same request until 24 hours have passed. I cannot guarantee that if you email me right before an assignment or exam that I will be able to answer your question in time, so please make sure and email me early if you have a time-specific question.

Extra Credit and Retakes: There is one scheduled extra credit opportunity in the class. You may not retake quizzes.

Disability Services and Accommodations: Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability and need accommodations, contact Learning Enrichment and Disability Services (LEADS) located on 2nd floor Pearsons (north side), [608-363-2572](tel:608-363-2572), [learning@beloit.edu](mailto:learning@beloit.edu) or through [olesena@beloit.edu](mailto:olesena@beloit.edu). For accommodations in my class, you are to bring me an Access Letter from the Director of LEADS and then we will discuss how to implement the accommodations. Contact that office promptly; accommodations are not retroactive.

**Free peer tutoring** is available for most classes. For a tutor, apply by going to your Portal, to the Student Life tab, and then apply using the Tutoring Forms (on left) and Request a Tutor. If you have any questions, contact LEADS.

If you want support from an **Organizational Tutor**, they are available in the Learning Lab (Blaisdell 103B) Sundays through Thursdays from 6-8 pm. You also can request an organizational tutor on the portal.

Every effort will be made to give you agency over disclosure of your disability status. Confidentiality is maintained to the extent possible but at times others need to know some information to provide you appropriate accommodations.

Inclusivity: **Inclusivity** is a demonstration of equity and social justice through awareness, understanding, and respect for the differences in identity, culture, background, experience, and socialization, and the ways in which these forms of difference impact how we live and learn. Inclusivity requires equitable, institution-wide representation and access to resources. In practice, this manifests itself by each individual being aware of, committed to, and responsible for the well-being and care of all students, staff, and faculty.