



**PSCI.502 01W**

**Political Science 502: Applied Data Analysis**

Fall 2021

**Time:** W 5:00p–7:30p

*"Just because someone quotes you a statistic or shows you a graph, it doesn't mean it's relevant to the point they're trying to make. It's the job of all of us to make sure we get the information that matters, and to ignore the information that doesn't."*

Daniel J. Levitin, *A Field Guide to Lies: Critical Thinking in the information Age* (2016)

*"Sometimes the job of a data scientist to know when you don't know enough."*

Cathy O'Neill, *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy* (2016)

**INSTRUCTOR INFORMATION**

**Instructor:** Dr. Ayal K. Feinberg

**Office Location:** 148 Ferguson Social Sciences

**Office Hours:** TR 10:45a – 12:15p, W 10:45a – 12:15p, & By Appointment  
appointment

**University Email Address:** Ayal.Feinberg@tamuc.edu

**Communication Response Time:** 48 Hours maximum

**COURSE INFORMATION**

**Required Texts:**

Johnson, Janet Buttolph, Henry T. Reynolds, and Jason D. Mycoff. *Political science research methods*. Cq Press, 2019.

\*\*\*Referred to as PSRM from this point on\*\*\*

**Optional Texts:**

Howard, Christopher. *Thinking like a political scientist: a practical guide to research methods*. University of Chicago Press, 2017.

\*\*\*Referred to as TLPS from this point on\*\*\*

Any additional course material and documents will be posted to MyLeo. Students should be checking the course MyLeo link for new reading at least 24 hours before every class.

**Course Description:**

The formulation and justification of research questions and the research design. An examination of the major qualitative research approaches such as case studies, comparative historical, institutional, etc. The course aims to teach students the basic methods and reasoning procedures for conducting advanced research in political science.

The specific purpose of this course is to introduce graduate students to the scientific method and the use of empirical research approaches in social scientific inquiry. The goal of this course is to provide students the necessary background to being their own novel scholarly research. To do so, students will engage with the philosophical and theoretical debates that have informed advances in political science. They will learn the steps necessary to construct a sound research project and how to formulate it into journal article format. Students will also be exposed to the variety of different empirical research designs that are used across the social sciences. Lastly, students will learn about different statistical approaches ranging from descriptive statistics to inferential statistics including the foundations of regression analysis.

As part of the statistical training offered in this course, students will use the statistical packages through Microsoft Excel. However, this course does not require advanced mathematical skills or any prior knowledge of the computer. All students are expected to create a research design or significantly alter and develop an existing research design for the purpose of future data analysis, which will constitute the main assignment for this course.

**Student Learning Outcomes**

*By completing this course, you will be able to:*

1. Discuss how historical developments in our understanding of science contribute to our contemporary pursuits of knowledge
2. Formulate research questions that can be answered using empirical approaches commonly used in the social sciences
3. Collect, design, and analyze projects that incorporate original data
4. Describe the role of statistics in social science research and demonstrate how to create testable hypotheses.
5. Demonstrate knowledge of the appropriate methods, techniques, and data that social and behavioral scientists use to make an inference.

**COURSE REQUIREMENTS****Instructional Methods**

This is a traditional university class that requires your regular attendance despite being web-based. You should make a sincere effort to attend the course's live Zoom lectures every week. During classes, you will listen to lectures, participate in interactive simulations, and engage in lively discussions. The more engaged you are as a student and student-body, the less

standard lecturing will take place. Therefore, it is vitally important you complete all assigned reading for classes. This course will also have a lab component (as part of regular class hours which can be accomplished at home and virtually) that further emphasizes the importance of your regular attendance.

### **Student Responsibilities and Succeeding in this Course**

First, define what *success* means to you. If you want to get an A in the course, focus on doing well on every assignment. If you want a B or a C for the course, you may want to emphasize some assignments over others. Remember, this course is absolutely critical for political science majors. Your grade will send important signals to the political science department, the university, and potential employers, about your abilities.

Second, take good notes. Taking good notes starts when you begin your assigned reading. Don't wait to see what topics I cover during class presentations, as they will not necessarily be exhaustive. Review each reading assignment for key terms and concepts, and make sure you are familiar with them. Test yourself on defining these terms and concepts with a focus on being able to explain their importance in designing political science research.

Third, get together with your peers to prepare for your exams. Form study groups and review assigned readings with each other. This will not only help you to fill in possible gaps in your course notes, but discussing class topics with peers often leads to new insights on the materials. It can also lead to lifelong friendships. If you are shy, come to your instructor as they may know who is already engaging in study groups.

Finally, and perhaps most obviously, come to class. Attendance is strongly correlated with better performance on assignments as well as higher overall course grades. Classes that examine statistics might seem straightforward at first, but they can also become significantly more complicated at the blink of an eye. If you miss just a single class, you may fall very far behind. Furthermore, if you miss classes, it is likely you will also miss key insights we discuss in class that may make their way on to your exams. Consequently, while acquiring good notes from a peer could replace missing class on extremely rare and unavoidable occasions, habitual nonattendance almost guarantees that you will miss critical in-class discussions of topics, concepts, and ideas. Simply put, do your best to show up for class every day. After all, you paid for it!

### **Grading and Assessment:**

You are required to read all assigned reading being discussed in each day's class. If the assigned reading is to be taught over several class periods, you will need to complete all readings by the last day the subject will be reviewed. However, you should make every effort to complete readings prior to its first discussion in class. Doing so will arm you with the tools necessary to best understand the topics, ideas and concepts that will be explored during class lectures and allow you to ask intelligent questions that can contribute to advancing the course discourse. All assignments must be turned in at or before the start of class on their due date unless otherwise specified on the course website. Failure to turn assignments on the due date without prior notification and explanation will result in the student receiving a zero. Similarly, students who fail to take the exam on the assigned date without a university sanctioned explanation will receive a zero on that grading item.

Course grading and assessment expectations will be discussed in greater detail below:

Major Course Assignments and Examinations:

Research Design Paper	40%
Midterm Exam:	20%
Final Exam:	20%
Homework:	10%
Attendance/Participation:	10%

Research Design Paper (40%)

You will be writing an original research design paper in this course. Your research design must be a scholarly paper that assesses a causal relationship(s) surrounding a social science phenomenon that interests you. The assignment requires everything you would expect in a published empirical political science journal article except for the actual data analysis (and related components). A full outline of your research design assignment expectations will be provided to students on MyLeo at the start of the course. All parts of the research design, including the final paper, must be turned in through the course website on MyLeo. All aspects of your research design paper are subject to review through plagiarism software such as TurnItIn and all plagiarized assignments will receive a zero and result in an F for the course.

Although you will be writing a single research paper, this assignment contains three parts, all of which are required to receive a grade for your research design paper. The first part of your paper (due September 20<sup>th</sup>) will consist of a 2-page double-spaced document that summarizes your social science research question and your interest in it. It also requires the citation of at least two scholarly sources. The second part of your paper (due November 8<sup>th</sup>) will consist of a draft of your literature review, theory, and hypotheses and requires at least six scholarly sources. The third part of your paper is your final draft (due December 2<sup>nd</sup>). It will consist of an abstract, introduction, literature review, theory with original hypotheses, data and measurement section, conclusion, reference sections, and appendix. Students interested in earning an additional 1% extra credit to their final grade will have the opportunity to present their research design paper during lectures on December 8<sup>th</sup>.

Midterm Exam & Final Exam (20% each, 40% total)

There are two exams in this class. You may think of them as a midterm and a final, and they generally correspond to the middle and end of the semester. Each exam will cover completely different material. These exams will include objective (multiple-choice, true-false, and math) questions as well as more subjective short answer questions and essay questions. Dates for the exams are on the course schedule; both exams will be held in our classroom. I strongly encourage you to show up early on these days because no one will be able to start the exam after the first person has finished. Exams may be re-scheduled if you contact me prior to the exam date with a university accepted excuse (work, trips to the beach, and midnight opening of movies are not considered reasonable). Make-up exams will be given on a case-by-case basis and may have an entirely different format from the original assessment (such as a

closed-note essay). Make-up exams tend to be significantly more challenging than the original, so make every possible effort to take the exams on the dates they are given.

### Homework (10%)

There will be two separate homework assignments that each count for 5% of your final grade. They will consist of a mix of both analytical and statistical problems. These homework assignments tend to incorporate questions that will be critical to the construction of your research paper. Consequently, timely and careful completion of your homework assignments for the course is strongly correlated with a higher research paper and course grade. All homework assignments will be available on MyLeo at least a week before their due date. All homework assignments must be submitted through MyLeo as well. Homework assignments emailed to the professor will not receive a grade of zero. If you have any issues with submitting your homework through MyLeo, you must contact the professor before the due date.

### Attendance/Participation (5% each, 10% total)

Your attendance/participation grade is made up of two components. First, I will take roll at the start of at least eight classes throughout the course. The days that I choose to take roll are at my discretion. In general, they tend to occur when class is lightly attended, which rewards those students who regularly come to class. Consequently, you must plan on attending all classes scheduled for the course. The only excused absences are those approved by the university, and the student must acquire formal documentation and approval of an absence within a week of the missed class. This course will also utilize several in-class simulations. Your instructor will document student participation in at least two of these simulations. The attendance portion of your attendance participation grade will be scored as follows:

- A (5%) = 0-1 missed classes/simulations
- B (4%) = 2-3 missed classes/simulations
- C (3%) = 4 missed classes/simulations
- D (2%) = 5 missed classes/simulations
- F (0%) = 6+ missed classes/simulations

Thoughtful and active participation in class discussions is a vital part of this course. Only attending class does not in any way guarantee that you are contributing to learning. Your informed participation in class requires having done all readings in advance of the class in which that reading will be discussed. You should be sure to write down questions or comments you have regarding the assigned reading. I reserve the right to call on students at times to help ensure everyone has an opportunity to contribute to discussions. There is a strong correlation between grades in the participation portion of the course and your overall grade. The instructor's estimation of your contributions to in-class discussion will count for the other half of your attendance/participation grade. This part of your grade will be scored as follows:

- A (5%) – Questions/comments/discussions show superior knowledge of the readings
- B (4%) – Questions/comments/discussions show sufficient knowledge of the readings
- C (3%) – Questions/comments/discussions show knowledge of the readings
- F (0%) – Questions/comments/discussions show no knowledge of the readings

## TECHNOLOGY REQUIREMENTS

### LMS

All course sections offered by Texas A&M University-Commerce have a corresponding course shell in the D2L Online Learning Management System (LMS). Below are technical requirements

LMS Requirements:

<https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

LMS Browser Support:

[https://documentation.brightspace.com/EN/brightspace/requirements/all/browser\\_support.htm](https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm)

YouSeeU Virtual Classroom Requirements:

<https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements>

### Access and Navigation

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or [helpdesk@tamuc.edu](mailto:helpdesk@tamuc.edu).

**Note:** Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

### Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

<https://community.brightspace.com/support/s/contactsupport>

## COURSE AND UNIVERSITY PROCEDURES/POLICIES

### Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

## **Student Conduct**

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the [Student Guidebook](#).

<http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: <https://www.britannica.com/topic/netiquette>

## **TAMUC Attendance**

For more information about the attendance policy please visit the [Attendance Procedure 13.99.99.R0.01](#).

<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

## **Academic Integrity**

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

[Undergraduate Academic Dishonesty 13.99.99.R0.03](#)

## **Students with Disabilities – ADA Statement**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

### **Office of Student Disability Resources and Services**

Texas A&M University-Commerce

Gee Library- Room 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: [studentdisabilityservices@tamuc.edu](mailto:studentdisabilityservices@tamuc.edu)

Website: [Office of Student Disability Resources and Services](#)

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

## **Campus Counseling Center**

The Counseling Center at A&M-Commerce, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit [www.tamuc.edu/counsel](http://www.tamuc.edu/counsel)

### **Nondiscrimination Notice**

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

### **Campus Concealed Carry Statement**

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1

### **Reminder for Political Science Majors & Double Majors**

All political science majors must complete and submit a graduating senior portfolio made up of course work. You should keep copies of your work from this class for potential submission. For more information, including the forms, guidelines and an instructional video on how to compile the portfolio, please see the "INFORMATION FOR SENIORS" link on the Department of Political Science webpage."



## COURSE OUTLINE / CALENDAR

DATE	TOPIC	READING
Sep. 1	Course Introduction	None
Sep. 8	Explanation & Understanding: Scientific Discovery	PSRM Chp. 1 & MyLeo
Sep. 15	Studying Politics Scientifically	PSRM Chp. 2, TLPS Chp. 1, & MyLeo
Sep. 22	Scholarly Work & Literature Reviews	PSRM Chp. 3 & MyLeo
Sep. 29	Theory & Hypothesis Generation	PSRM Chp. 4 & TLPS Chp. 2
Oct. 6	Measurement	PSRM Chp. 5 & TLPS Chp. 3
Oct. 13	Research Design	PSRM Chp. 6 & TLPS Chp. 4
<b>Oct. 20</b>	<b>Exam</b>	<b>Review</b>
Oct. 27	Experimental & Quasi- Experimental Designs	MyLeo
Nov. 3	Case Studies & Observation	PSRM Chp. 8 & MyLeo
Nov. 10	Survey Research	PSRM Chp. 10 & MyLeo
Nov. 17	Quantitative Analysis	PSRM Chp.12-14 & TLPS Chp. 7
Nov. 24	Sampling	PSRM Chp. 7 & TLPS Chp. 5
Dec. 1	Structuring Data	PSRM Chp. 11 & MyLeo
<b>Dec. 8</b>	<b>Research Paper Presentations</b>	<b>None</b>
<b>December Exam Time</b>	<b>Final Exam</b>	<b>Review</b>

\*\*\* Research Paper Due Date – December 3<sup>rd</sup>, 2021