

## GVPT 622: Quantitative Methods for Political Science (Fall 2023)

**Class meeting Monday 12:30-3:15, TYD 1111**

**Lab & Discussion Section Friday, 3:00-5:00, LEF 0227**

**Professor:** David Cunningham

**Pronouns:** he/him/his

**Email:** dacunnin@umd.edu

**Office Hours:** Tuesday 1-2 in Chincoteague 3117C  
and by appointment

**Teaching Assistant:** Harriet Goers

**Pronouns:** she/her

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**Office Hours:** TBA

### Course Description

This course provides an introduction to research methods and quantitative research in political science. The course has two main goals. The first is to enable students to read and evaluate political science research that uses quantitative methods. The second is to prepare students for more advanced methodology courses. In addition, you will learn how to apply basic quantitative methods to political questions and acquire basic knowledge of the statistical software program R. The class will meet twice a week—lectures with the instructor and lab sessions with the teaching assistant. The lab sessions are designed to teach students how to use the statistical program R for data analysis, review homework assignments and exams, and answer any questions about the substantive material covered in the class lectures.

### Required Resources

Two books (listed below) are required for this course. You must also have access to (and use) the statistical package R. You may download the software on your personal computer for free at: <https://cran.r-project.org/>.

Required:

- Pollock III, Philip H. and Barry C. Edwards. 2020. The Essentials of Political Analysis (6th ed.). CQ Press.
- Pollock III, Philip H. and Barry C. Edwards. 2018. An R Companion to Political Analysis (2nd ed.). CQ Press.

### Policies and Resources for Graduate Courses

It is our shared responsibility to know and abide by the University of Maryland's policies that relate to all courses, which include topics like:

- Academic integrity
- Student and instructor conduct
- Accessibility and accommodations
- Attendance and excused absences
- Grades and appeals
- Copyright and intellectual property

Please see the University's website for graduate course-related policies at: <https://gradschool.umd.edu/course-related-policies>

## Course Guidelines

### Names/Pronouns and Self-Identifications:

The University of Maryland recognizes the importance of a diverse student body, and we are committed to fostering inclusive and equitable classroom environments. I invite you, if you wish, to tell us how you want to be referred to in this class, both in terms of your name and your pronouns (he/him, she/her, they/them, etc.). Keep in mind that the pronouns someone uses are not necessarily indicative of their gender identity. Visit [trans.umd.edu](https://trans.umd.edu) to learn more.

Additionally, it is your choice whether to disclose how you identify in terms of your gender, race, class, sexuality, religion, and dis/ability, among all aspects of your identity (e.g., should it come up in classroom conversation about our experiences and perspectives) and should be self-identified, not presumed or imposed. I will do my best to address and refer to all students accordingly, and I ask you to do the same for all of your fellow Terps.

### Communication with Peers:

With a diversity of perspectives and experience, we may find ourselves in disagreement and/or debate with one another. As such, it is important that we agree to conduct ourselves in a professional manner and that we work together to foster and preserve a virtual classroom environment in which we can respectfully discuss and deliberate controversial questions. I encourage you to confidently exercise your right to free speech—bearing in mind, of course, that you will be expected to craft and defend arguments that support your position. Keep in mind, that free speech has its limit and this course is NOT the space for hate speech, harassment, and derogatory language. I will make every reasonable attempt to create an atmosphere in which each student feels comfortable voicing their argument without fear of being personally attacked, mocked, demeaned, or devalued.

Any behavior (including harassment, sexual harassment, and racially and/or culturally derogatory language) that threatens this atmosphere will not be tolerated. Please alert me immediately if you feel threatened, dismissed, or silenced at any point during our semester together and/or if your engagement in discussion has been in some way hindered by the learning environment.

## Grading

Your final grade will be based on the following four categories:

Assignment	Percentage %
Midterm Exam #1	25%
Midterm Exam #2	25%
Homework Problem Sets	25%
Final Exam	25%
Total	100%

Final course grades will be determined using the following cut-offs:

Final Grade Cutoffs							
+	97.00%	+	87.00%	+	77.00%	+	67.00%
A	93.00%	B	83.00%	C	73.00%	D	63.00%
-	90.00%	-	80.00%	-	70.00%	-	60.00%
						F	<60.0%
						-	

You will complete three take-home exams in this course—two midterms and a comprehensive final—that are due on the scheduled dates listed in the Course Schedule below. During the weeks of the two midterms, the lab session will be held online earlier in the week at a time to be determined. I will post each midterm exam to the Elms course site following that online lab session. I will post the Final exam after the lab session on Friday, December 8th (it is due on Friday, December 15th). You will submit all completed exams through the Elms course site. I will announce the details of each exam's format at least one week prior to the scheduled date.

## Homework Problem Sets

There are multiple problem sets due over the course of the semester. You can expect to receive an assignment each week (with some exceptions). I will distribute problem sets through Elms, and you must submit your completed problem on Elms. If you know in advance that you will be unable to submit the problem set, you must contact me at the earliest possible time to make alternative arrangements. I encourage students to work together on the problem sets. However, you must turn in your own work that is in your own words (including script files) to receive credit for the problem sets. Students should refer to the section on academic integrity and thoroughly familiarize themselves with UMD's policies in this regard.

## Academic Integrity

The University's Code of Academic Integrity is designed to ensure that the principles of academic honesty and integrity are upheld. In accordance with this code, the University of Maryland does not tolerate academic dishonesty. Please ensure that you fully understand this code and its implications because all acts of academic dishonesty will be dealt with in accordance with the provisions of this code. All students are expected to adhere to this Code. It is your responsibility to read it and know what it says.

## Attendance

Please be aware that, as in most courses, the substantive course material builds on itself during the semester. Thus, regular attendance and study time outside of class meetings will be critical to effectively internalize and master the core concepts. If you are going to miss class on an exam day and would like your absence to be excused, you are required to email the instructor in advance of the class and to bring documentation to support your excused absence on the day you return.

The University of Maryland policy, entitled Assignments and Attendance on Dates of Religious Observance, states that students should not be penalized in any way for participation in religious observances and that, whenever feasible, they be allowed to make up academic assignments that are missed due to such absences. However, the student must personally hand the instructor a written notification of the projected absence within two weeks of the start of the semester.

# COURSE SCHEDULE

The following is a tentative class and reading schedule. The course schedule and required readings are subject to change. Note: Required readings listed each day should be completed prior to the start of class.

August 28 — Course Introduction

No lab September 1, no class September 4

September 8 — Lab Session

- Pollock & Edwards R Companion, Chapter 1

September 11 — Descriptive Statistics

- Pollock & Edwards Chapters 1-2

September 15— Lab Session

- Pollock & Edwards R Companion, Chapters 2-3

September 18 — Relationships Between Two Variables

- Pollock & Edwards Chapter 3

September 22 — Lab Session

- Pollock & Edwards R Companion, Chapters 4-5

September 25 — Research Design

- Pollock & Edwards, Chapter 4

September 37 — Lab Session

- Pollock & Edwards R Companion, Chapter 5

October 2 — Applications & Midterm Exam Review

- Segal, Jeffrey A. & Albert D. Cover. 1989. "Ideological Values and the Votes of U.S. Supreme Court Justices." *American Political Science Review* 83(2): 557-565.
- Sondheimer, Rachel Milstein & Donald P. Green. 2010. "Using Experiments to Estimate the Effects of Education on Voter Turnout." *American Journal of Political Science* 54(1): 174-189.

TBA Virtual–Lab Session—Midterm Exam Review

## **Midterm Exam #1 (Due October 6 by 11:59pm)**

October 9 — Probability Theory

- Pollock & Edwards, Chapter 5

October 13 — Lab Session

- Pollock & Edwards R Companion, Chapter 6

October 16 — Hypothesis Testing I

- Pollock & Edwards, Chapter 6

October 20 — Lab Session

- Pollock & Edwards R Companion, Chapter 6

October 23 — Hypothesis Testing II

- Pollock & Edwards, Chapter 7

October 27 — Lab Session

- Pollock & Edwards R Companion, Chapter 7

October 30 — Hypothesis Testing III

November 3 — Lab Session

- Pollock & Edwards R Companion, Chapter 7

November 6 — Applications & Midterm Exam Review

- Brooks, Deborah Jordan. 2011. “Testing the Double Standard for Candidate Emotionality: Voter Reactions to the Tears and Anger of Male and Female Politicians.” *The Journal of Politics* 73: 597-615.

TBA Virtual Lab Session—Midterm Exam Review

## **Midterm Exam #2 (Due November 10 by 11:59pm)**

November 13 — Regression Analysis I

- Pollock & Edwards, Chapter 8

November 16 — Lab Session

- Pollock & Edwards R Companion, Chapter 8

November 20 — No Class (Thanksgiving Holiday)

November 24 — No Lab Session (Thanksgiving Holiday)

November 27 — Regression Analysis II

- Pollock & Edwards, Chapter 9

December 1—Lab Session

- Pollock & Edwards R Companion, Chapter 9

December 4 — Regression Analysis Extensions & Final Exam Review

December 8—Lab Session Final Exam Review

**Final Exam — Due by December 15th, 11:59 pm**

## **Resources & Accommodations**

### **Accessibility and Disability Services**

The University of Maryland is committed to creating and maintaining a welcoming and inclusive educational, working, and living environment for people of all abilities. The University of Maryland is also committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs, or activities of the University, or be subjected to discrimination. The **Accessibility & Disability Service (ADS)** provides reasonable accommodations to qualified individuals to provide equal access to services, programs and activities. ADS cannot assist retroactively, so it is generally best to request accommodations several weeks before the semester begins or as soon as a disability becomes known. Any student who needs accommodations should contact me as soon as possible so that I have sufficient time to make arrangements.

For assistance in obtaining an accommodation, contact Accessibility and Disability Service at 301-314-7682, or email them at [adsfrontdesk@umd.edu](mailto:adsfrontdesk@umd.edu). Information about [sharing your accommodations with instructors, note taking assistance](#) and more is available from the **Counseling Center**.

## **Student Resources and Services**

Taking personal responsibility for your own learning means acknowledging when your performance does not match your goals and doing something about it. I hope you will come talk to me so that I can help you find the right approach to success in this course, and I encourage you to visit [UMD's Student Academic Support Services website](#) to learn more about the wide range of campus resources available to you.

In particular, everyone can use some help sharpening their communication skills (and improving their grade) by visiting [UMD's Writing Center](#) and schedule an appointment with the campus Writing Center.

There are a wide range of resources to support you with whatever you might need ([UMD's Student Resources and Services website](#) may help). If you feel it would be helpful to have someone to talk to, visit [UMD's Counseling Center](#) or [one of the many other mental health resources on campus](#).

## **Notice of Mandatory Reporting**

Notice of mandatory reporting of sexual assault, sexual harassment, interpersonal violence, and stalking: As a faculty member, I am designated as a "Responsible University Employee," and I must report all disclosures of sexual assault, sexual harassment, interpersonal violence, and stalking to UMD's Title IX Coordinator per University Policy on Sexual Harassment and Other Sexual Misconduct.

If you wish to speak with someone confidentially, please contact one of UMD's confidential resources, such as [CARE to Stop Violence](#) (located on the Ground Floor of the Health Center) at 301-741-3442 or the [Counseling Center](#) (located at the Shoemaker Building) at 301-314-7651. You may also seek assistance or supportive measures from UMD's Title IX Coordinator, Angela Nastase, by calling 301-405-1142, or emailing [titleIXcoordinator@umd.edu](mailto:titleIXcoordinator@umd.edu).

To view further information on the above, please visit the [Office of Civil Rights and Sexual Misconduct's](#) website at [ocrsm.umd.edu](http://ocrsm.umd.edu).

## **Basic Needs Security**

If you have difficulty affording groceries or accessing sufficient food to eat every day, or lack a safe and stable place to live, please visit [UMD's Division of Student Affairs website](#) for information about resources the campus offers you and let me know if I can help in any way.

## **Veteran Resources**

UMD provides some additional supports to our student veterans. You can access those resources at the office of [Veteran Student life](#) and the [Counseling Center](#). Veterans and active duty military personnel with special circumstances (e.g., upcoming deployments, drill requirements, disabilities) are welcome and encouraged to communicate these, in advance if possible, to the instructor.

## **Course Evaluation**

Please submit a course evaluation through [Student Feedback on Course Experiences](#) in order to help faculty and administrators improve teaching and learning at Maryland. All information submitted to Course Experiences is confidential. Campus will notify you when Student Feedback on Course Experiences is open for you to complete your evaluations at the end of the semester. By completing all of your evaluations each semester, you will have the privilege of accessing through Testudo the evaluation reports for the thousands of courses for which 70% or more students submitted their evaluations.

## **Copyright Notice**

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