POS 6746
QUANTITATIVE METHODS IN POLITICAL RESEARCH

FALL 2023
M, 18:00-20:50
HPH 310

Class Time and Place: M, 18:00-20:50; HPH 310	**Office Hours**: Mon. and Wed., 10:30 to 1:00, *or by appt.* (phone, Zoom, etc.)
Professor: Dr. Drew Lanier	**Email**: drew.lanier@ucf.edu
Office: Phillips Hall 302	**Credit Hours**: three (3)
Phone: (407) 823-2608 [main number]	

Very often a solution on some means of quantifying phenomena or states that have hitherto been assessed in terms of "rather more," "rather less," or "a lot of" or—[that] sturdiest workhorse of scientific literature—"marked" ([e.g.,] "The injection elicited a marked reaction"). Quantification as such has no merit except insofar as it helps to solve problems. To quantify is not to be a scientist, but goodness, it does help.

— Sir Peter B. Medawar, *Advice to a Young Scientist* (1981)

"When you cannot measure, your knowledge is meager and unsatisfactory"

— Lord William Kelvin (inscription found atop the Social Science Research Building, University of Chicago) (Pritchett 1948, xi)

COURSE OBJECTIVES AND GOALS:

What variables predict if two states will go to war in a particular year? How likely is it that Justice Scalia will vote to grant cert. in an abortion rights case? Are there long-term, underlying deterministic trends to U.S. Supreme Court decision-making, or is it a totally random, stochastic process? How strong is the relationship between issue preferences and voter behavior? Do domestic political institutions systematically impact currency markets? The use of quantitative methods allows political scientists to answer these types of questions. This course examines these methods and their practical application in researching settings (Martin Syllabus 2006).

The main objective of this course is to the fundamental terms and basic tools that social scientists use in and quantitative designs. We will focus on being particularly critical of research designs. Since social scientists are interested in explaining *why* some phenomena vary or change, across people, time or geographical units, we will explore the kinds of variance and statistical distributions of commonly used political variables, followed by a discussion of inferring the manner and extent to which multiple variables co-vary (vary together).

We will examine how to use numerous indicators to represent a single concept and how to evaluate the reliability and validity of these concepts. Ordinary Least Squares (OLS) is the most commonly introduced method, and it is important in that it serves as the foundation for more complex statistical methods. We will focus on some variants of the OLS model and what to do when problems arise, as they inevitably do in quantitative political analytical studies. We will, therefore, spend some time learning this method in both bivariate (explaining how one variable varies with another) and multivariate (explaining one variable with at least two others) designs. We will also focus on the inferential logic of linear regression and its variants in hypothesis testing, which involves evaluating the error in one's estimation (Baird Syllabus 2006).

This class is particularly concerned with model specification, meaning that theories ought to be as exhaustive as possible. However, one's model of the world must not (and should not) match the world precisely—as social scientists, we are interested in balancing accuracy with parsimony. Although social scientists have statistical ways of aiding an analyst in the process of balancing parsimony with accuracy, developing sound political theory that has exhausted other studies for one's research question as its basis is of primary importance in this class. The question that we continue to ask as we develop theoretical models is whether there are alternative explanations for our variable of interest that are not included in the present analysis. If so, then the model (the theoretical though simplistic representation of empirical reality) is not well

specified. On the other hand, if explanatory variables do not contribute significantly to our understanding of the concept, then they ought to be excluded from one's analysis of political phenomena.

"Politics," according to David Easton (1965), is the authoritative allocation of values and resources. Scholars of politics, then, seek to describe, explain and predict various political phenomena through customary and traditionally understood methods of theoretically-based inquiry. In this course, students will be exposed to these methods, and try their hand at formal political analysis, as it is understood in the discipline. Students will learn why political science deigns to call itself a "science" and come to understand what it means to study politics in a scientific manner. They will see how political scientists complete real research and how they communicate those findings in a transmissible and understandable way. They will learn how to analyze data, how to measure political phenomena and how to implement various statistical procedures to accomplish some of those goals.

Overall, there are several goals of this course:

- Students who successfully complete the course will acquire a **better knowledge of the discipline** of political science, the broad subfields of the field of study, and the ways by which political scientists go about their research;
- Students who successfully complete the course will **understand the elements of the scientific approach** and how they apply to the **systematic study of politics**.
- Students who successfully complete the course will have a **better understanding of research methods**, from data collection to research design to model specification and estimation to statistically analyzing data and reporting one's results, as they apply to political analysis;
- Students who successfully complete the course will be **better consumers of political and statistical information**, which will help them better grasp the concepts of other graduate courses in the discipline in addition to helping them understand the scholarly world into which they have entered;
- Students who successfully complete the course will have a **strong understanding of the proper use of statistical computing programs**, such as SPSS, and **how to interpret validly the results** that are obtained to generalize such findings to other theoretical settings and contexts.

NATURE OF THE COURSE

This course will be unlike many others that you have taken. It deals with new and unfamiliar terminology and ways of thinking about the political world. We focus here on the methods that political scientists laboring in many of the subfields in the discipline use to accumulate knowledge. While it will refer to substantive findings in several areas, such information acquisition will not be the focus of the course. Rather, we will examine the ways by which that substantive knowledge was acquired, tested and communicated to the scholarly community, as scientific research is inherently a social undertaking (King, Keohane and Verba 1994).

Accordingly, some students may enter the course with a deep sense of dread or trepidation about the nature of the course and its demands. To be sure, such respect for the course is beneficial as it sharpens your attention to the course requirements. However, merely because one may fear the course should not be the sole reason to avoid it. Instead, students should confront that fear that comes with undertaking new activities, overcome it and then enjoy the new-found feeling that comes with knowing that you have conquered some new endeavor without fleeing in panic, overwhelmed with anxiety. This is a skill that will benefit students many times over during their professional (and no doubt personal) lives, I assure you. Moreover, students will come to realize that knowledge is empowering; that is, one does not take as given information that is provided by others without their explaining the exact nature of that information as well as how it was collected and analyzed. In addition, students will learn how to conduct their own research that can withstand the scrutiny of others who are similarly openly skeptical of your reported findings. This is the way of the real world as it applies to political research. It is a daunting, but deeply satisfying endeavor.

Thus, students must approach this course like they have none other:

- **read the assigned material prior to your coming to class** (I assume that students have done so when class begins and I personally question class members to determine their individual level of knowledge and understanding of the day's material). Most of the material, especially early in the course, is dense and difficult to understand. Allow enough time to read it, re-read it and then summarize the authors' arguments so that one can quickly refresh one's recollection as class time draws nigh;

- students should, also, **follow the professor's instructions precisely**, **do the homework exercises**, and **anticipate problems** in completing the course requirements;

- and, above all, **ask questions** when one does not understand a concept or idea. Asking questions is a mark of wisdom, as it shows that one is aware that he/she does not understand a concept or idea and is humble enough to make that transitory condition public. *This is especially the case in a graduate research methods course*.

REQUIRED AND RECOMMENDED TEXTS AND MATERIALS

Required Books

American Political Science Association, Committee on Publications. 2018. *Style Manual for Political Science*. Rev. ed. Washington, DC: APSA (ISBN 978-1-878147-62-2). [Available on the Canvas Reserves Discussion Topic]. The Style Manual is also available digitally at www.apsanet.org/stylemanual.

Pollock, Philip H., III, and Barry C. Edwards. 2020. *The Essentials of Political Analysis*. 6th ed. Washington, DC: Sage/Congressional Quarterly Press. ISBN 978-1-5063-8961-4.

Pollock, Philip H., III, and Barry C. Edwards. 2019. *An Stata Companion to Political Analysis*. 6th ed. Washington, DC: Congressional Quarterly Press. ISBN 978-1-5063-7970-8. **BUY ONLY NEW COPIES OF THIS TITLE. DO NOT BUY USED COPIES AS THEY WILL LIKELY HAVE SOME OF THE PAGES MISSING.**

Recommended Books

Agresti, Alan and Christine Franklin. 2007. *Statistics: The Art and Science of Learning from Data*. Upper Saddle River, NJ: Pearson Prentice Hall. ISBN 0-13-008369-0.

Gujarati, Damodar N. 2009. *Basic Econometrics*. 5th ed. Boston: McGraw-Hill. ISBN 0-07-337577-9.

Gujarati, Damodar N. 2022. Essentials of Econometrics. 5th ed. Washington, DC: Sage. ISBN 978-1-0718-5039-8.

Required Materials

Students will need a basic calculator that performs the following functions: addition, subtraction, multiplication, division, squaring of variables, and square root. Bring it, along with the other course materials, to class each evening as it will be used to work problems assigned in class.

Other course readings assigned will be on library reserve or available through the various databases accessible through the UCF Library's homepage. Many of the articles are downloadable directly from JSTOR as well (http://www.jstor.org).

GENERAL REFERENCES

Babbie, Earl. 2007. *The Practice of Social Research*. 11th ed. Belmont, CA: Thomson Wadsworth. ISBN 0-495-09325-4.

McClave, James T., and Terry Sincich. 2006. *Statistics*. 10th ed. Upper Saddle River, NJ: Prentice Hall. ISBN 0-13-149755-3.

Pindyck, Robert S., and Daniel L. Rubinfeld. 1998. *Econometric Models and Economic Forecasts*. 4th ed. Boston: Irwin/McGraw-Hill. ISBN 0-07-050208-0.

Salvatore, Dominick, and Derrick Reagle. 2002. *Theory and Problems of Statistics and Econometrics*. 2d ed. Schaum's Outline Series. New York: McGraw-Hill. ISBN 0-07-134852-2.

Studenmund, A.H. 2006. *Using Econometrics: A Practical Guide*. 5th ed. Boston: Addison Wesley. ISBN 0-321-31649-5.

Trochim, William M.K. 2001. *The Research Methods Knowledge Base*. 2d ed. Cincinnati: Atomic Dog.

WEB RESOURCES

Canvas Site

The Course has a Webcourses site associated with it. It is an innovative technology that allows the students to interact with each other, post messages to a common bulletin board, take anonymous surveys, and many other tasks that facilitate comprehension of the course material and collaborative learning among the course's students in a student-centered context. This site, however, is a password-protected domain. A more thorough discussion of this course tool as well as how to navigate through it will be offered in class.

Freakonomics Blog at New York Times (http://freakonomics.blogs.nytimes.com/)

Follow the conversation of the authors of *Freakonomics* and those who have read it.

Also, note that Pollock and Edwards's *Companion* does not contain the Stata program itself. One must either find that in one of the general access computer labs, find it at https://ucfapps.cloud.com/Citrix/StoreWeb/#/apps/all/static/All/ or purchase some student version of Stata. The *Companion* describes the steps to download the data that are then loaded into Stata separately to complete the required assignments.

CODEBOOKS AND DATA BASES:

Spaeth, Harold J. 1997. *Expanded United States Supreme Court Judicial Database, 1946-1968 Terms*. Second ICPSR version. Ann Arbor: Interuniversity Consortium for Political and Social Research. Study number 6557. These data are available from public data archives.

Spaeth, Harold J. 1997. *United States Supreme Court Judicial Database, 1953-1995 Terms*. Seventh ICPSR version. Ann Arbor: Interuniversity Consortium for Political and Social Research. Study number 9422. These data are available from public data archives.

Songer, Donald R. 1997. *United States Courts of Appeal Database 1925-1996.* These data are available from public data archives.

Federal Judicial Center. 1996. *Federal Court Cases: Integrated Data Base, 1970-1994*. Fifth and Sixth ICPSR Editions. Ann Arbor: Interuniversity Consortium for Political and Social Research. Study number 8429. These data are available from public data archives.

Gary Zuk, Deborah J. Barrow, and Gerard S. Gryski. 1997. *Multi-User Database on the Attributes of United States Appeals Court Judges,* 1801-1994. First ICPSR Edition. Ann Arbor: Interuniversity Consortium for Political and Social Research. Study number 6796. These data are available from public data archives.

Note also that many of these datasets may be obtained directly by navigating to the homepage for the S. Sidney Ulmer Project, Research and Data Archives, headquartered at the University of Kentucky (Dr. Kirk A. Randazzo, Director) (http://www.as.uky.edu/polisci/ulmerproject/databases.htm).

Another invaluable resource is the **Inter-university Consortium for Political and Social Research** (ICPSR) (http://www.icpsr.org) that archives literally hundreds of datasets (including several versions of the National Election Survey (NES) and the General Social Survey (GSS)) from the most important and ground-breaking studies in political science and other fields of inquiry.

LISTSERVS AND OTHER ORGANIZATONS OF NOTE

You may wish to join the APSA's Political Methodology section (http://www.apsa.com/section_316.cfm). The section's homepage may be found by navigating to http://polmeth.wustl.edu/. The section publishes *Political Methodologist* and *Political Analysis*.

Dr. Edwards co-administers a Facebook group "Political Science Data" that you may wish to request to join.

COURSE REQUIREMENTS

Mandated Documentation of Course Attendance

As of fall 2014, all faculty members are required to document students' academic activity at the beginning of each course in order to comply with federal regulations involving student financial aid. In order to document that you began this course, please complete the **self-introduction assignment**, on the Canvas Discussion board, by the end of the first week of classes, or as soon as possible after adding the course, but no later than Friday, August 25, 2023. Failure to do so will result in a delay in the disbursement of your financial aid (adapted from a draft statement from Academic Affairs Office, UCF).

Read

Although it may sound obvious, one way to SUBSTANTIALLY increase your understanding of the course (and, therefore, your grade) is to READ THE ASSIGNED MATERIAL. Many students simply listen to the lectures and hope that such effort will be enough to see them through the assignments. Such will not suffice especially in this course as it is a HANDS-ON EXPERIENCE, where much of the learning is by doing. In order to comprehend more fully the class discussion, you should carefully read the daily assignment BEFORE COMING TO CLASS AND HAVE CONSIDERED ITS IMPLICATIONS. *This is especially the case in a graduate methods course*, where the course material is opaque much of the time.

Class Participation

To help you better understand the course material, class topics will be discussed using a combination of lecture, student-led discussion and the Socratic Method, in which the instructor and the student engage in a question-and-answer sequence so as to explore the issue discussed thoroughly as well as to develop in the

student the ability to analyze issues. As this is a graduate seminar, students are expected to read and prepare for discussions as if they were responsible for leading the class discussion independently. Indeed, on some evenings, selected students will do just that. Be advised that the points associated with class participation are NOT points that I simply give to you as result of consistent class attendance, as you may have learned during your undergraduate career. YOU MUST EARN THESE POINTS. If you simply sit in class and do not inject yourself into the conversation, you will receive very few points for this component of the course. Not only must your answer the questions I put to you, you must actively participate to receive most of the points for participation. I value quantity and quality for this component of the course grade.

Moreover, class participation involves the completion of several in-class assignments, which are designed to emphasize the skills, concepts and ideas discussed extensively in lecture. **Forthright and honest completion of them will help you understand the topics more fully**. *This is especially the case in a graduate methods course like this one.* While their completion is considered as part of the Class Participation allocation, they also help you understand the concepts and ideas that will likely appear on the exams and help you complete the research paper due at the end of class. Class **participation is worth ten (10) percent** of your final grade.

Stata Assignments

The third formal component of the course is the completion of several analytical or Stata assignments due throughout the term, the latter of which are available in Pollock and Edwards (2019). These exercises will enable you to get hands-on experience with data analysis and how to obtain estimates of many political phenomena of interest to political researchers. Problem sets are particular important in giving you practical experience in working with difficult concepts. *This is especially the case in a graduate methods course*. A more thorough discussion of the assignments and the software needed to complete them will be offered in class.

Across the term, you are required to submit the mandatory analytical/Stata assignments, the earned scores for which will be averaged into 35 percent of your grade. The mandatory assignments are marked with an asterisk (*). Some assignments are listed as practice only and are, therefore, optional. I would encourage you, however, to complete the practice assignments as they will assist you in developing the skills and practices necessary to do well in the course.

I DO NOT ACCEPT LATE ASSIGNMENTS. PLAN YOUR PREPARATION AND ASSIGNMENT SUBMISSION ACCORDINGLY. "LATE" MEANS *ANY TIME* AFTER THE DUE DATE AND TIME FOR THE RESPECTIVE ASSIGNMENT. THIS MEANS IF YOUR ASSIGNMENT IS ONE MINUTE LATE IN BEING SUBMITTED, IT WILL BE REFUSED. ANTICIPATE PROBLEMS AS THEY *WILL* OCCUR JUST AS YOU ARE TRYING TO FINISH YOUR ASSIGNMENT, I ASSURE YOU. If you come to me with an exotic tale of woe about your not submitting on time your assignments, I will nod relatively sympathetically and then point to this warning.

The following are rules regarding the Stata assignments that MUST be followed:

- For each of the assignments, attach the printout of analyses as well as the Command Syntax that accompanies those analyses. The Command Syntax file may be obtained through Stata's interface, called the Do-File Editor.

- Place your name on each assignment. Staple physical assignment submissions once in the upper left-hand corner.

- Work alone on each of the assignments. Do not work in groups. The work must represent YOUR effort, not that of others, just as you will encounter on the course exams and the comprehensive quantitative exam. Failing to abide by this rule constitutes plagiarism and will be dealt with

vigorously (see statement below regarding plagiarism).

Webcourses/Canvas

You should become familiar with all of your colleagues, even those who do not speak during every class. Your usage of the Canvas tool will be assessed at the end of the term to distribute this portion of the course grade. Specific class announcements will be made on the course site. You, thus, must check the site regularly. It is made a component of the course so as to facilitate communication between you as members of the class. You will find that your colleagues have similar backgrounds and experiences and that they can be your best allies in making it through this course, just as you will discover later in professional life, if you have no already had that experience.

Furthermore, you must submit **two substantive questions** to the Weekly Questions Discussion Topic each week about the reading that will form the basis of the beginning of the class discussion for that respective week. This portion of your grade includes twenty (20) percent for the completion of these questions, allocated based on the proportion of such questions that you submit throughout the term. Completing them is a good way to check your comprehension of the week's material, and it is an easy way to earn points for the final course grade. The questions must be submitted by 12:00 noon of the day immediately preceding the corresponding class day.

The following are regulations regarding the weekly questions that must be followed:

- Do NOT submit blank responses for the weekly questions. **Repeated violation of this rule** will result in the entire class's being required to send responses to me through my UCF email account.

- Failing to complete even a small number of the weekly questions will negatively affect your final course grade.

Research Paper

The research paper, comprising **35 percent of your final grade**, must adhere to the following guidelines:

1. The paper should be no fewer than 15 pages. They should be word processed on white paper, double-spaced throughout (including notes and references), with one inch margins on all sides. They must be printed in a reasonably-sized, proportionally-spaced font. For references, bibliography, and footnote/endnote style, students will be required to use the style sheet of the *American Political Science Review*, the department's official style sheet.

2. The research paper must adhere to the following general outline:

    a. Justify the topic. Indicate why this is an important topic. Concentrate on its *theoretical* significance.

    b. State the problem to be studied. Use specific hypotheses where appropriate.

    c. Review the relevant literature. Describe what kinds of research have been done on your topic and indicate the problems or shortcomings of the existing literature.

    d. Specify what approach, model, or theory you are testing or the ways in which a particular approach of model directs you to the problem you are investigating and how it shapes the questions that you are asking or the hypotheses that you are testing. It need not be a highly sophisticated quantitative approach, but it must be quantitative in nature.

e. Set out hypotheses derived from your theory. State the empirically-derived research questions that guide your research: that is, what phenomenon are you testing? How will you determine if the hypothesis has been satisfied or not? A *minimum* of three exogenous variables are required in your analysis, and the corresponding hypotheses for them.

f. Give specific *operational definitions* of the concepts you are using.

g. Indicate what kind(s) of *data* you will need and how you will obtain them. Discuss the problems you faced in obtaining the data and putting them to appropriate use.

h. Indicate the *research skills* you will use complete the project: languages, statistical and computer skills, library research, etc.

i. Results and Discussion: describe and present the results of your study. Were your hypotheses satisfied or not? If not, why not? Describe the results in a clear and understandable manner to an educated reader.

j. Conclusion: Discuss what the study has found and the implications of those findings. What has the reader learned? What additional questions do your results provoke? Are their limitations to your findings?

Research paper topics must be personally approved by the instructor. For this purpose, an *approved* one to two page final description and outline of the paper must be turned in no later than the beginning of class on **October 9.** Students who fail to turn in an appropriate term paper description and outline on time will be penalized one-half a letter grade on the final term paper, regardless of the quality of the final paper. Brief conferences with the instructor, well ahead of the due date for the paper, concerning proposed topics are strongly encouraged. Students are furthermore encouraged to discuss term paper topics with the instructor at any time, and to seek formal approval for their description/outlines as soon as they are ready, preferably well in advance of their due date.

It will be helpful to think of the research paper as the first stage in the preparation of a thesis. The instructor will try to suggest good research ideas as we go through the readings of the course. You are encouraged to suggest research ideas also, both in and out of class, as well as to discuss your ideas on such research possibilities with your classmates and the instructor. The research area may be any substantive area in political science.

COURSE POINT ALLOCATION

In calculating final course averages, the *only* rounding will be up from 0.5 below the grade required in the professor's sole professional discretion. For example, those students whose final averages are 89.5 *may* earn an "A-," those with a final average of 79.5 may earn a "B-," and so on. I give you opportunities to earn points *all semester long*. Do not expect that I will give you any more points at the end of the term. I interpret this clause very stringently, especially in a graduate course like this one.

COMPONENT	WEIGHT
Class Participation	10%
Stata/In-Class Assignments	35%
Weekly Questions	20%
Research Paper	35%

GRADING SCALE (as a Percentage of Total Points)

GRADE	PERCENTAGE
A	90-100
B+	89-87
B	86-80
C+	79-77
C	76-70
D+	69-67
D	66-60
F	59 or less

COURSE POLICIES (aka My Pet Peeves)

There are several points you should note.

No Excuses

First, as this is a graduate class, it should be manifest that this class operates under a "No-Excuse" policy. It is incumbent upon you to be responsible for the notes given in the unlikely event that you miss class. If you miss class, you NEED NOT inform me about it. If you do inform me of your impending absence, you are NOT thereby immunized from the terms of the syllabus. Because this course is an upper division class, you will quickly learn that if you intend to pass, you should plan on regularly attending class, keeping up with the lecture, and completing the assignments as they are given. These suggestions are especially important in this course. *This is especially the case in a graduate research course*.

Seating Chart

Second, shortly after the course begins, I send around a seating chart to facilitate learning names and the Socratic method. I will quickly learn your last names (which is the manner by which I address you, preceded by the appropriate title). Please decide where you would like to sit within the first few days of class. If you have vision difficulties, please situate yourself accordingly, as I use the visual display extensively.

Accommodations for Physically Challenged Students

Third, if you are physically challenged, every attempt is made to accommodate your learning needs. See me by the end of the first week of class so that we can make appropriate arrangements. This class operates in accordance with the Office of Student Disability Services here at the University and federal guidelines governing the *Americans with Disabilities Act* (1990).

Plagiarism and Cheating: Don't Let it Happen to You!

Fourth, please consult the policy regarding plagiarism and cheating which is attached. Each of you must review the University policy on the penalties for plagiarism. Almost every semester, one or more students appropriates the published work of someone else, and I have had the unfortunate responsibility of failing those students and seeking disciplinary action against them. I can readily distinguish the work of a graduate student from a scholar or practitioner in the field. You are on notice that I have failed students because they decided to risk their academic careers by choosing the easy way out.

Caveat Emptor

Fifth, this is a very challenging graduate research methods course with correspondent responsibilities for you. I expect that you will devote at least 20 *hours per week outside* of class studying, reading, completing assignments, and meeting with other students to discuss and review the course material. **This is a challenging course**. Plan accordingly.

Socratic Method as a Pedagogical Modality

Sixth, class topics are discussed using a combination of student-led discussion, lecture and the Socratic method. This means that you are expected to answer questions about the text and material that we have covered in class AND TO HAVE THOUGHT ABOUT ITS IMPLICATIONS. You will quickly learn that one of my favorite questions is, "what does that mean?." You are expected to read and prepare for discussions. This course is not a spectator sport. I assume that the reading for the day will be done for the week that it is assigned. LEARN TO PACE YOURSELF ACCORDINGLY! *This is especially the case in a graduate research methods course like this one*.

Respect for Colleagues and Their Comments

Additionally, you are on notice that this course sometimes engages in difficult discussions about our political leaders. Hopefully we will have intelligent discussions regarding the concepts involved in the course. Above all, everyone will have the right to express their informed beliefs freely and openly without fear of reprisal from other students or myself.

Attendance

Seventh, I do not have a mandatory attendance policy. However, I send around attendance sheets at the beginning of each class so I know who has attended class, and so I can gauge your class participation even if you do not speak in class. Persons who are "borderline" in their grades *may* receive the "benefit of the doubt" in the final computation of grades if they have frequently attended class. It is YOUR responsibility to sign the attendance sheet. The sheet is sent around at the beginning of each class. If you are late, you must see me after class to sign it; otherwise, I will not give you the "benefit of the doubt." You are responsible for announcements made in class and changes to the course syllabus and expectations even if you are absent when such announcements are made. *This is especially the case in a graduate research methods course like this one*.

Laptops and Audiotaping Allowed

Eighth, I do not mind if students use laptop computers or audiotapes during lecture. Please note, however, that because I allow you to use such devices, I may request that students who have missed class be allowed access to your notes. Students who miss class should see me before requesting your notes, and the student who has missed must make all reasonable accommodations to meet your scheduling limitations for conducting the exchange. The student providing the notes is not responsible for providing any materials and should not incur any expenses associated with the exchange. Students providing the notes are not required to provide notes for more than three (3) lecture periods that have been missed. If you feel that you are being coerced about providing your notes to someone who is not attending class, please see me immediately. I reserve the right to revoke the privilege of using the above devices.

Word Processing Required

Ninth, all assignments (with the exception of the Stata exercises) must be word processed. If you do not know how to use a computer or word processor, it is strongly recommended that you learn to do so. If you are concerned about this, please see me. Numerous tutorials are available on campus to assist you. You

should allocate enough time for printer cartridges to run dry and dogs to eat papers and computer disks! You laugh, but trust me: I have heard every excuse in the book!

Duplicates of Assignments

Tenth, while I have never lost an assignment, I require that you make copies of all work submitted to me in the unlikely event that something should happen. In the event that I should need a copy of the assignment, and you are not able to provide it, you will not receive credit. Even after I have returned materials to you, please retain the work until after you have received your grade from the Registrar. This protects you from any possibility that you might receive an erroneous grade.

Technological Tools

Eleventh, I require that everyone learn how to use e-mail and the technological tools associated with the course. They can facilitate your comprehension of the course material. I have found that this encourages students to communicate with me about questions you may have regarding the material discussed in class. You are responsible for any assignments or other information that I distribute on the course's associated web sites or via email. If you already have an e-mail account (either through the University or a commercial server), please do not sign-up for an additional account, but give me your address. You should check your mail on a regular basis as I post any changes about class assignments to your account and/or to the course-associated web site. If your email address changes during the semester, you MUST NOTIFY ME.

Classroom Decorum

(1) Because it is disruptive to everyone to have students arrive late and/or leave early, *you must be on time for every class and you are expected to remain in class until the period is completed*, unless there are extraordinary circumstances (*e.g.*, you are about to become ill on the person in front of you) or you have informed me of your *urgent need* to leave before the period ends. "Urgent need" does not include job-related or familial responsibilities or issues. How would you act in the "real world"? Would you arrive late or leave early? Act in a disruptive manner?

(2) Do not talk (even in a whisper) with any of your neighbors. It disturbs them and it disturbs me. If you are talking, I presume you have a question about the material and I will ask you about it.

(3) Do not listen to any electronic device, read a newspaper or other material not previously assigned for class. If you do so, you will be counted ABSENT FOR THE DAY. Repeated violation of this rule will result in a grade of WF or F.

(4) PLEASE SILENCE YOUR CELL PHONES AND/OR OTHER ELECTRONIC DEVICES. Repeated violation of this rule constitutes "continuous unruly behavior." (*See* Classroom Decorum Policy No. 5 below).

(5) Continuous unruly behavior will result in a grade of WF or F. An example of this is the persistent discourtesy of talking in class while someone else (including the instructor) is doing so. The classroom is not a living room, in which one talks during a television show. If you wish to talk, absent yourself from class with the appropriate diminution of your class grade.

Time-Sensitive Communications and Assignments

In past semesters, some students have had difficulty submitting assignments to me by the due date and time. This difficulty arises, in part, from their reliance on email and other technologies beyond their control. Accordingly, for time-sensitive communications, send me a message through the WebCT email tool, contact me on the telephone, or see me in person during office hours (or make an appointment if you are not

reasonably available during those hours). *This is especially the case in a graduate research methods course like this one*.

Best Allies

Your best allies in helping you make it through this course unscathed are those sitting around you. They will help you understand the material better, and you will do the same for them. By teaching the material, one begins to truly understand the concepts and ideas discussed. The learning process begins with teaching. *This is especially the case in a graduate research methods course like this one*.

Syllabus NOT a Contract

Finally, this syllabus is not deemed to be a contract. I reserve the right to change any of the exam times or assignments by providing you with a 48-hour notice of such changes. Such changes are announced in class, sent on e-mail and/or posted on the course Canvas site. Therefore, you are responsible for any changes that may occur during the course of the session. If you are late, you should check with your classmates about the missed material. As such, your absence in class is not deemed a sufficient excuse as to why work is incomplete. In the event that the University administration closes school for any reason (*e.g.*, hurricane), any assignments or examinations that were scheduled on the evening of the canceled class will be due at the next regularly scheduled class meeting.

TENTATIVE COURSE SCHEDULE, TOPICS AND ASSIGNMENTS

PE = Pollock and Edwards's *The Essentials of Political Analysis* (6th ed.)
Stata = Pollock and Edwards's *A Stata Companion to Political Analysis* (4th ed.). Mandatory assignments are marked with an asterisk (*)
G = Gujarati's *Basic Econometrics* (4th ed.)
CR = item can be located on the Course Reserve discussion topic on the Canvas site
JSTOR = Use jstor.org to locate the reference.

SECTION I. PHILOSOPHY OF SCIENCE, EMPIRICISM, AND THE SCHOLARLY STUDY OF POLITICS

August 21, 2023

TOPIC 1: Introduction to the Course and Scientific Analyses of Political Data

- Overview of the Course
- Brief Introduction to Stata and statistical computing
- Empiricism and the Elements of the Scientific Method
- The Meaning of Studying Politics Scientifically
- Political Behaviorialism

Read:

- Syllabus and other relevant documents
- Stata, pp. xv-xvi, Chapt. 1
- PE, pp. xxi-xxvi
- Achen, Christopher H. 2002. "Advice to Students Taking a First Political Science Graduate Course in Statistical Methods." *The Political Methodologist* 10:10-12. CR

Assignment:

- Self-Introduction Assignment (on Canvas) (due 08/25/23 by 11:59 pm)*

August 28, 2023

TOPIC 2: The Research Process: Deduction, Induction, and Theory-Building

- Conceptual and Operational Definitions
- Measurement Validity and Reliability
- Validity and Reliability of Measures of Political Phenomena
- Measurement Error (Random and Systematic)

Read:

- PE, Chapt. 1

Assignment:

- Distinguishing Empirical from Normative Statements (due 08/28/2023 by 6:00 pm)*
- Stata, Chapt. 1 Exercises

September 4, 2023

***** LABOR DAY HOLIDAY – NO CLASS *****

September 11, 2023

SECTION II: QUANTITATIVE ANALYSES OF POLITICAL DATA: FUNDAMENTAL CONCEPTS AND TECHNIQUES

TOPIC 3: Quantitative Data Fundamentals

- Types of Data
- Levels of Measurement (NOIR)
- Types of Research Designs (experimental, quasi-experimental, etc.)
- Hypothesis Formation
- Hypothesis Testing
- Null and Alternative Hypotheses
- The Ecological and Individual Hypotheses

Read:

- PE, Chapts. 2 (pp. 34-38), 3 and 4
- Cook, Thomas D., and Donald T. Campbell. 1979. "Casual Inference and the Language of Experimentation." *Quasi-Experimentation: Design and Analysis Issues for Field Settings*. Chicago: Rand McNally (Chapt. 1, pp. 1-36). CR

Assignment:

- Levels of Measurement Exercises (due 09/18/2023 by 6:00 pm)
- Hypothesis Formation Exercises (IV, DV, Unit of Analysis) (due 09/18/2023 by 6:00 pm)*

September 18, 2023

TOPIC 4: Univariate Analyses

- Measures of Central Tendency, Variation, and Dispersion
- Univariate Analyses: What Can *One* Variable Tell us?
- Standardized Scores (z-scores)
- The Standard Normal Distribution (SND)
- Graphical Analyses
- Recoding a Variable
- Associated Stata Commands

Read:

- PE, Chapt. 2, pp. 39-70
- Stata, Chapt. 2 (Descriptive Statistics) and Chapt. 3 (Transforming Variables)

Assignment:

- Stata, Chapt. 2 Exercises, 1-8 (due 09/25/2023 by 6:00 pm)*
- Stata, Chapt. 3 Exercises, 1-4

September 25, 2023

TOPIC 6: Hypothesis Testing I and Bivariate Analyses

- Bivariate Analyses: What Can *Two* Variables Tell us?
- Cross-Tabulations and Controlled Comparisons
- Associated Stata Command Language

Read:

- PE, Chapt. 5
- Stata, Chapt. 4 (Making Comparisons) and Chapt. 5 (Making Controlled Comparisons)
- Hurwitz, Mark S., and Drew Noble Lanier. 2001. "Women and Minorities on State and Federal Appellate Benches, 1985 and 1999." *Judicature* 85(September-October):84-92. CR

Problem Sets:

- Stata, Chapt. 4, Exe. 1-5, and 7
- Stata, Chapt. 5, Exe. 1-4

October 2, 2023

TOPIC 7: Hypothesis Testing II and Measures of Association

- Measures of Association and their Use
- Random Sampling Error
- The Inferential Process and Hypothesis Testing: From Samples to Populations
- *t*-distribution
- Associated Stata Command Language

Read:

- PE, Chapt. 6
- Stata, Chapt. 6 (Making Inferences About Sample Means)
- Wood, Sandra L., Linda Camp Keith, Drew Noble Lanier and Ayo Ogundele. 1998. "'Acclimation Effects' for Supreme Court Justices: A Cross-Validation, 1888-1940." *American Journal of Political Science* 42(April): 690-97. CR

Assignment:

- Stata, Chapt. 6, Exe. 1-3 (due October 9, 2023 by 6:00 pm)*

October 9, 2023

Approved Research Topics Due by this Date

TOPIC 8: Hypothesis Testing III, More Measures of Association and Linear Regression I

- Chi-Square
- Pearson's *r*
- The PRE approach
- Introduction to Linear Regression and Its Theory

- Associated Stata Command Language

Read:

- PE, Chapt. 7
- Stata, Chapt. 7 (Chi-square and Measures of Association), Chapt. 8 (Correlation and Linear Regression)
- Wood, Sandra L., Linda Camp Keith, Drew Noble Lanier and Ayo Ogundele. 2000. "Opinion Assignment and the Chief Justice: 1888-1940." *Social Science Quarterly* 81(3):798-809. CR

Assignment:

- Stata, Chapt. 7, Exe. 1-3

For Reference:

- G, Chapts. 1-3

October 16, 2023

TOPIC 9: Bivariate and Multivariate Linear Regression II

- Multivariate Regression and Its Interpretation
- The Least Squares Principle
- R^2 and GOF Measures
- Global Model Performance
- Associated Stata Command Language

Read:

- PE, Chapt. 8
- Tate, C. Neal, and Roger Handberg. 1991. "Time Binding and Theory Building in Personal Attribute Models of Supreme Court Voting Behavior, 1916-88." *American Journal of Political Science* 35(2): 460-80. JSTOR

Assignment:

- Stata, Chapt. 8, Exe. 1-6* (due October 23, 2023 by 6:00 pm)

For Reference:

- G, Chapts. 4-7
- Lewis-Beck, Michael. 1980. "Bivariate Regression: Fitting a Straight Line." *Applied Regression: An Introduction*. Thousand Oaks, CA: Sage.

SECTION III: QUANTITATIVE ANALYSES OF POLITICAL DATA: INTERMEDIATE CONCEPTS AND TECHNIQUES

October 23, 2023

TOPIC 10: Dummy Variables and Interaction Effects in OLS

- Interaction Effects
- Dummy Variables

Read:

- Stata, Chapt. 9 (Dummy Variables and Interaction Effects)
- Friedrich, Robert J. 1982. "In Defense of Multiplicative Terms in Multiple Regression Equations." *American Journal of Political Science* 26:797-833 (available on JSTOR).
- Lanier, Drew Noble, and Sandra L. Wood. 2001. "Moving On Up: Institutional Position, Politics and the Chief Justice." *The American Review of Politics* 22(Spring):93-127. CR
- Suits, Daniel B. 1984. "Dummy Variables: Mechanics v. Interpretation." *The Review of Economics and Statistics* 66 (Feb.): 177-80 (available on JSTOR).

Problem Sets:

- Stata, Chapt. 9, Exe. 1-5

October 30, 2023

TOPIC 11: OLS, Analyzing Residuals and Regression Diagnostics I

- Violations of OLS Assumptions
- Multicollinearity
- Heteroscedasticity

Read:

- Lewis-Beck, Michael. 1980. "Bivariate Regression: Assumptions and Inferences." *Applied Regression: An Introduction*. Thousand Oaks, CA: Sage. CR.
- Lewis-Beck, Michael. 1980. "Multiple Regression." *Applied Regression: An Introduction*. Thousand Oaks, CA: Sage. CR.

For Reference:

- A&F, Chapts. 10-12
- G, Chapts. 7-9, 10-13

November 6, 2023

TOPIC 12: OLS, Analyzing Residuals and Regression Diagnostics II

- Serial Correlation
- Linear Regression Variants
- Cochrane-Orcutt Procedure
- Prais-Winsten Transformation

Read:

- Stimson, James A. 1985. "Regression in Time and Space: A Statistical Essay." *American Journal of Political Science* 29:914-47. (Available on JSTOR).

Problem Sets:

- Handout (due Nov. 13, 2023 by 6:00 pm)*

November 13, 2023

TOPIC 13: Regression Across Time and Space

- Pooled Cross-Sectional Time Series
- Lagged Endogenous Variables
- Durbin's H
- Stationarity

Read:

- Lanier, Drew Noble. 2003. "Who Wins and Who Loses Across Time: Liberalism of United States Supreme Court, 1888-1997." In *Of Time and Judicial Behavior: United States Supreme Court Agenda-Setting and Decision-Making, 1888-1997*. Susquehanna, PA: Susquehanna University Press. CR
- Lanier, Drew Noble. 2003. "The Long-Run Relationship Between the Supreme Court's Decision-Making Environment and Its Liberalism." In *Of Time and Judicial Behavior: United States Supreme Court Agenda-Setting and Decision-Making, 1888-1997*. Susquehanna, PA: Susquehanna University Press. CR
- Stimson, James A. 1985. "Regression in Time and Space: A Statistical Essay." *American Journal of Political Science* 29:914-47. (available on JSTOR).

Problem Sets:

- Handout

November 20, 2023

TOPIC 14: Logistic Regression

- Limited or Binary Dependent Variables
- Interpretation as Compared to OLS estimates

Read:

- PE, Chapt. 9
- Stata, Chapt. 10

Assignment:

- Stata, Chapt. 10 exercises

November 27, 2023

***** NO CLASS – USE TIME TO WORK ON RESEARCH PAPERS *****

***** RESEARCH PAPERS DUE TO LANIER, IN .PDF FORM, ON CANVAS BY WED., NOVEMBER 29, 2023 BY 6:00 PM *****

December 4, 2023

RESEARCH PAPER PRESENTATIONS

General Policies of the University

***Source for these policies*:** UCF Faculty Center for Teaching and Learning (http://fctl.ucf.edu/TeachingAndLearningResources/CourseDesign/Syllabus/statements.php)

Academic Integrity

Students should familiarize themselves with UCF's Rules of Conduct at <http://osc.sdes.ucf.edu/process/roc>. According to Section 1, "Academic Misconduct," students are prohibited from engaging in:

a. Unauthorized assistance: Using or attempting to use unauthorized materials, information or study aids in any academic exercise unless specifically authorized by the instructor of record. The unauthorized possession of examination or course-related material also constitutes cheating.

b. Communication to another through written, visual, electronic, or oral means: The presentation of material which has not been studied or learned, but rather was obtained through someone else's efforts and used as part of an examination, course assignment, or project.

c. Commercial Use of Academic Material: Selling of course material to another person, student, and/or uploading course material to a third-party (such as coursehero.com) without authorization or without the express written permission of the university and the instructor. Course materials include but are not limited to class notes, Instructor's PowerPoints, course syllabi, tests, quizzes, labs, instruction sheets, homework, study guides, handouts, etc.

d. Falsifying or misrepresenting the student's own academic work.

e. Plagiarism: Using or appropriating another's work without any indication of the source, thereby attempting to convey the impression that such work is the student's own.

f. Multiple Submissions: Submitting the same academic work for credit more than once without the express written permission of the instructor.

g. Helping another person violate academic behavior standards.

For more information about Academic Integrity, students may consult The Center for Academic Integrity <http://www.academicintegrity.org/icai/assets/FVProject.pdf>.

For more information about plagiarism and misuse of sources, see "Defining and Avoiding Plagiarism: The WPA Statement on Best Practices" <http://wpacouncil.org/node/9>.

Responses to Academic Dishonesty, Plagiarism, or Cheating

Students should also familiarize themselves with the procedures for academic misconduct in UCF's student handbook, *The Golden Rule* <http://goldenrule.sdes.ucf.edu/docs/goldenrule.pdf>. UCF faculty members have a responsibility for students' education and the value of a UCF degree, and so seek to prevent unethical behavior and when necessary respond to academic misconduct. Penalties can include a failing grade in an assignment or in the course, suspension or expulsion from the university, and/or a "Z Designation" on a student's official transcript indicating academic dishonesty, where the final grade for this course will be preceded by the letter Z. For more information about the Z Designation, see <http://goldenrule.sdes.ucf.edu/zgrade>.

The Golden Rule: A Handbook for Students (University of Central Florida) defines academic dishonesty as including cheating and plagiarism. Cheating is defined as "unauthorized assistance; communication to another through written, visual or oral means. The presentation of material which has not been studied/learned, but obtained through someone else's efforts and used as part of an examination, course assignment or project constitutes a violation. The unauthorized possession or use of examination or course related material may also constitute cheating" (p. 6). Plagiarism is defined as the deliberate use of another's work "without any indication of source, thereby attempting to convey the impression that such work is the student's own. Any student failing to properly credit ideas or materials taken from another is plagiarizing. Any student who knowingly helps another violate academic behavior standards is also in violation of the standards (p.6-7)".

Normally, the penalty for a violation of this policy is an "F" in the course.

Course Accessibility Statement

The University of Central Florida is committed to providing access and inclusion for all persons with disabilities. Students with disabilities who need disability-related access in this course should contact the professor as soon as possible. Students should also connect with Student Accessibility Services (SAS) <http://sas.sdes.ucf.edu/> (Ferrell Commons 185, sas@ucf.edu, phone 407-823-2371). Through Student Accessibility Services, a Course Accessibility Letter may be created and sent to professors, which informs faculty of potential access and accommodations that might be reasonable. Determining reasonable access and accommodations requires consideration of the course design, course learning objectives and the individual academic and course barriers experienced by the student.

COVID-19 Safety Protocols

I recognize and understand the difficult times that we are all now face. The COVID-19 pandemic impacts us all in many ways, including physically, mentally, emotionally, financially, academically, and professionally. I will work with you on challenges you may be encountering and to provide reasonable support and resources to help you succeed. However, please keep in mind that I will hold you accountable, especially in terms of class attendance, participation, and assignments.

Statement Regarding Masks in Classrooms

UCF expects, when feasible, that all members of our campus community who are able to do so get vaccinated, and we expect all members of our campus community to wear masks indoors, in line with the latest CDC guidelines. Masks are required in approved clinical or health care settings. Social distancing is also a beneficial practice.

Notifications in Case of Changes to Course Modality

If the instructor falls ill during the semester, there may be temporary changes to this course, including having a backup instructor take over the course or going remote for a short time. Please look for announcements or mail in Webcourses@UCF or Knights email for any temporary alterations to this course.

COVID-19 and Illness Notification

Students who believe they may have been exposed to COVID-19 or who test positive must contact UCF Student Health Services (407-823-2509) so proper contact tracing procedures can take place. Students should not come to campus if they are ill, are experiencing any symptoms of COVID-19 or have tested positive for COVID-19. Students should contact their instructor(s) as soon as possible if they miss class for any illness to discuss reasonable adjustments that might need to be made. When possible, students should contact their instructor(s) before missing class.

Campus Safety Statement

Emergencies on campus are rare, but if one should arise during class, everyone needs to work together. Students should be aware of their surroundings and familiar with some basic safety and security concepts.

- In case of an emergency, dial 911 for assistance.
- Every UCF classroom contains an emergency procedure guide posted on a wall near the door. Students should make a note of the guide's physical location and review the online version at <http://emergency.ucf.edu/emergency_guide.html>.
- Students should know the evacuation routes from each of their classrooms and have a plan for finding safety in case of an emergency.
- If there is a medical emergency during class, students having appropriate medical training may need to access a first-aid kit or AED (Automated External Defibrillator). To learn where those are located, see <http://www.ehs.ucf.edu/workplacesafety.html> (click on link from menu on left).
- To stay informed about emergency situations, students can sign up to receive UCF text alerts by going to <my.ucf.edu> and logging in. Click on "Student Self Service" located on the left side of the screen in the toolbar, scroll down to the blue "Personal Information" heading on the Student Center screen, click on "UCF Alert", fill out the information, including e-mail address, cell phone number, and cell phone provider, click "Apply" to save the changes, and then click "OK."
- Students with special needs related to emergency situations should speak with their instructors outside of class.
- To learn about how to manage an active-shooter situation on campus or elsewhere, consider viewing this video (<https://youtu.be/NIKYajEx4pk>).

Deployed Active Duty Military Students

A deployed, active-duty military student who believes that he/she requires a special accommodation due to that unique status should contact the instructor to discuss the circumstances.

Religious Observances

Students may encounter conflicts between the normal class schedule and their honoring major religious observances. Students are expected to notify, in writing, the instructor **at least two weeks in advance** of the relevant date if they intend to miss class or miss and assignment to observe a holy day of their religious faith.

Notice of Use of Turnitin.com

In this course, I may utilize turnitin.com, an automated system that instructors may use to quickly and easily compare each student's written assignment with billions of websites, as well an enormous database of student papers that grows with each student submission. Accordingly, student assignments may be subject to this additional check. After the assignment is processed, I receive a report from turnitin.com that states if and how another person's work was used in the assignment. For more detailed information about this process, visit http://www.turnitin.com.

[Portions of this Notice of Use of Turnitin.com policy were adapted from "Sample Wording for Syllabus," UCF Office of Student Rights and Responsibilities, Patricia A. MacKown, Director].