Meet the Instructor

My Introduction

My name is Angel M. Villegas-Cruz, and I am currently a dual-title Ph.D. candidate in Political Science and Asian Studies at Penn State. My research interests focus on the relationship between digital technologies and international politics, with an area specialization in China. I hold an M.A. in Political Science from Penn State with specializations in International Relations and Comparative Politics.

My Contact Information

Canvas Tools

Under normal circumstances, please use the built-in tools listed below to contact me. I will reply to your questions, concerns, and comments in a timely manner, not to exceed TWO business days.

- **General Questions Discussion Forum (Modules tab):** Ask general questions about the course or content here.
- **Inbox/Messages:** Send a message if you would like to discuss a personal matter (e.g. grades, illness, family emergency, etc.). Refer to the **Compose/Send a Message article (https://community.canvaslms.com/docs/DOC-2670)** or the **Conversations section in the Canvas Guide (https://community.canvaslms.com/docs/DOC-4121#jive_content_id_Conversations)** for support information.

*Note: You should report technical problems in the **Technical Help Discussion Forum (Modules tab)**, which is managed by this course's technical support team.*

Alternatives

If you believe that the Canvas tools are insufficient for your needs, you may use an alternative form of communication.

- **Office Hours:** By appointment (in State College, or via video-conferencing)
- **Phone:** 814-810-8459 (the least reliable way to contact me)
- **Email:** amv5718@psu.edu
  *Note: Only use this email address in an emergency. Under normal circumstances, use **Canvas email (Inbox/Messages)** instead.*

Course Syllabus

Jump to Today ✎ Edit

Welcome to PLSC 309: Quantitative Political Analysis

Course Overview

CATEGORY	INFORMATION
Credits	3
Prerequisites	Three Credits in Political Science
Delivery	Web (Canvas, https://psu.instructure.com)
Dates	See the **Calendar**.
Instructor	See the **Orientation** module under the **Modules** tab.

Description

This course introduces students to topics related to research design and quantitative analysis in political science. This course can be broken up into three parts. During the first part students will learn how to construct theories and hypotheses, how to quantify concepts, and how to evaluate the academic work of others. In the second part students will begin to learn how to test theories and explore relationship through the use of descriptive analysis and hypothesis testing. In the third and final part students will more thoroughly evaluate theories and hypotheses using correlation and regression analysis. The course will include classroom lectures and computer lab time to enable students to work hands-on with datasets. While there is no prerequisite for this course, basic math skills (algebra) are highly recommended.

Goals

This course has three goals:

1. To give you the tools to *understand* quantitative political science research. To that end, we'll spend the first part of the course discussing how to generate hypotheses and design research in a way that allows you to test those hypotheses using data.

2. To provide you with both the tools and the opportunity to *do* quantitative research in political science. To this end, we'll learn—both by hand and with computer software—to use a number of different statistical techniques, including hypothesis testing and regression analysis to assess our hypotheses.
3. To help you become more statistically literate so that the statistical techniques we discuss in class can help you become a more conscientious consumer of polling, news, and current political events more generally.

Objectives

At the end of this course, you will be able to:

1. identify a research question, create a theory to answer that question, and elaborate a series of hypotheses that can be used to test the implications of your theory;
2. select appropriate statistical techniques to help you answer your research question with data;
3. interpret and evaluate the results and techniques of other scholars' research; and
4. more accurately assess statistical information.

Organization

This course is made up of 12 lessons

For a typical lesson, you will complete the following activities and assignments:

- Read a few assigned readings.
- Take a short quiz based on assigned readings.
- Explore online course content.
- Complete a weekly Stata assignment.

In addition, you will complete two exams, and there will be a "take-home" assignment at the end of the semester.

Online Learning and Attendance

This course has been developed to promote asynchronous learning. The instructor and students do NOT meet on a designated day and time each week. For each lesson, there is a time frame to complete all activities and assignments, and you may work at your own pace within that time frame. However, you must adhere to the due dates outlined on the **Calendar**. (Due dates can also be viewed under the **Syllabus** tab.) You should log into the course daily to check for updates, review lessons, and participate in activities.

Materials

Required

- Kellstedt & Whitten. (2018). The Fundamentals of Political Science Research (3rd edition). New York: Cambridge University Press. ISBN: 9781316642672

- Kellstedt, P.M. & Whitten, G.D. (2019). *A Stata Companion for the Third Edition of the Fundamentals of Political Science Research*. Cambridge University Press. ISBN: 9781108447966
- **Stata Statistical software package**. You can purchase the Stata/BE for mid-sized datasets. It costs $48 for 6 months of access from the **Stata Student Pricing page (https://www.stata.com/order/new/edu/gradplans/student-pricing/)**

Tutor.com

Tutor.com is a 24/7 tutoring service that provides students with assistance in coursework, test preparation, research, writing, and more for various subjects. The tutors are subject-matter experts, and each student will have personalized one-on-one sessions with them. Students can schedule their own tutoring appointments to engage in interactive sessions that include a whiteboard and chat feature. The service can be utilized on any device that has Internet access. Students are encouraged to use the service throughout the semester.

Getting Started with Tutor.com:

- Launch Tutor.com by clicking the Tutor.com link in the Course Navigation Menu.
- Select the topic you are studying from the drop-down menu.
- From the subject drop-down menu, select your course.
- Ask your tutor a question in the text box. If you're working with a document, such as a rough draft of a writing assignment, you can upload the file here as well.
- Once you have made these selections, click Get a Tutor, and a tutor will be assigned to you within two minutes.
- You will then enter a virtual classroom with your tutor. Here, the interactive whiteboard and chat feature will be available. You will be able to talk with your tutor and use the tools. File sharing will be available for you and your tutor to review a document at the same time.
- After your session, please fill out the post-session survey to offer feedback on your experience.
- For a more detailed overview of Tutor.com, please view the ***How It Works* video. (https://www.youtube.com/watch?v=6GuyEMGRXW4)** If you have any questions or need additional help logging in, please contact **studentsupport@tutor.com (mailto:studentsupport@tutor.com)**

Grading

Final letter grades will be assigned based on the scale below.

Scale

LETTER GRADE	GRADING SCALE
A	93-100

LETTER GRADE	GRADING SCALE
A-	90-92
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	70-76
D	60-69
F	0-59

Due Dates

All assignments are due by 11:59 PM Eastern Time on the date indicated on the **Calendar**. (Due dates can be also be viewed under the **Syllabus** tab.) As a general rule, you will NOT be able to go back and make up missed assignments. It is your responsibility to keep up with your assignments. Students with an excused absence (e.g., hospitalization, jury duty, family emergency, or military service) may be asked to produce proper documentation in order to make up graded work. **All make-up work is at the discretion of the instructor.**

Veterans and currently serving military personnel and/or spouses with unique circumstances (e.g., upcoming deployments, drill/duty requirements, disabilities, VA appointments, etc.) are welcome and encouraged to communicate these, in advance if possible, to the instructor in the case that special arrangements need to be made.

Notes

- *To Do List: Some assignments may not appear in the To Do list under the Home tab. Use the Calendar or Syllabus to ensure that you are fully aware of assignment due dates.*

Assignments

Basic information about each assignment group is provided below. For detailed directions about an individual assignment, see the assignment information under the **Modules** tab.

ASSIGNMENT GROUP	%
Assignments	30%
Participation	20%
Reading Quizzes	10%
Exam 1	15%
Exam 2	15%
Take Home Assignment	10%
Extra Credit Assignment	up to 5%
Total	100%

Assignments (30%). Each week you will be assigned homework allowing you to practice the material learned in the course that week. These assignments will consist of Stata practice and may also include additional reading or practice problems.

PARTICIPATION (20%). Participation grades are made up of two components. First, you will need to participate in activities embedded within each lesson. These include things like discussion posts, practice problems, and Stata problems. Second, you will get participation credit from participating in the technical help forum *(It is highly recommended that you subscribe to this forum).* The class technical help discussion forum is a place for students to give and receive help with the more technical aspects of this course, particularly Stata-related questions. You should always post a question to this forum prior to emailing the instructor. You will receive participation credit for asking and answering questions on this forum.

READING QUIZZES (10% Total). Prior to starting the lesson each week, you will be required to complete a reading comprehension quiz based on the material assigned that week. There will be 12 reading comprehension quizzes throughout the course,

EXAM 1 (15% Total). Exam 1 will test you on material covered in the first 5 lessons. You will need to use Stata in order to answer many of the questions in the exam.

EXAM 2 (15% Total). Exam 2 will cover the material discussed in Lessons 06-08. You will need to use Stata in order to answer many of the questions in the exam.

Take Home Assignment (10% Total). At the end of the semester, you will be given a take home assignment to complete.

Extra Credit Opportunity (up to 5% Total). Starting in L11, you will have two opportunities to complete an extra credit assignment worth up to 5% of your final grade.

University Policies

Academic Integrity

*According to Penn State policy **G-9: Academic Integrity** (https://undergrad.psu.edu/aappm/G-9-academic-integrity.html) , an academic integrity violation is "an intentional, unintentional, or attempted violation of course or assessment policies to gain an academic advantage or to advantage or disadvantage another student academically." Unless your instructor tells you otherwise, you must complete all course work entirely on your own, using only sources that have been permitted by your instructor, and you may not assist other students with papers, quizzes, exams, or other assessments. If your instructor allows you to use ideas, images, or word phrases created by another person (e.g., from Course Hero or Chegg) or by generative technology, such as ChatGPT, you must identify their source. You may not submit false or fabricated information, use the same academic work for credit in multiple courses, or share instructional content. Students with questions about academic integrity should ask their instructor **before submitting work**.*

***Students facing allegations of academic misconduct may not drop/withdraw from the affected course** unless they are cleared of wrongdoing (see **G-9: Academic Integrity** (https://undergrad.psu.edu/aappm/G-9-academic-integrity.html)). Attempted drops will be prevented or reversed, and students will be expected to complete course work and meet course deadlines. Students who are found responsible for academic integrity violations face academic sanctions, which can be severe, and put themselves at jeopardy for other outcomes (see **G-9: Academic Integrity** (https://undergrad.psu.edu/aappm/G-9-academic-integrity.html)).*

Unless your instructor tells you otherwise:

- Always include an in-text citation that includes the author(s) last name(s) and the year the source was published at the end of any sentence or below any image that includes words, images, or ideas you found in a source, always included quoted text within quotation marks, and always include a reference for any source at the end of your paper (ask your instructor about the format you should use).
- All of your graded coursework must be created by you without help from anyone in the course or otherwise. If you have questions about this, you should ask your instructor before submitting work for evaluation.

- All course materials you receive or access are protected by copyright laws. You may use course materials and make copies for your own use, but unauthorized distribution and/or uploading of materials without the instructor's express permission is strictly prohibited. Students who engage in the unauthorized distribution of copyrighted materials may be held in violation of the University's Code of Conduct and/or liable under Federal and State laws.

Disability Access

Penn State welcomes students with disabilities into the University's educational programs. Every Penn State campus has an office for students with disabilities. The Student Disability Resources website provides **contact information for every Penn State campus** (https://equity.psu.edu/offices/student-disability-resources/campus-offices) at https://equity.psu.edu/offices/student-disability-resources/campus-offices. For further information, please visit the **Student Disability Resources website** (http://equity.psu.edu/student-disability-resources) at http://equity.psu.edu/student-disability-resources.

In order to receive consideration for reasonable accommodations, you must contact the appropriate disability services office at the campus where you are officially enrolled, **participate in an intake interview, and provide documentation** (http://equity.psu.edu/student-disability-resources/applying-for-services) described at http://equity.psu.edu/student-disability-resources/applying-for-services. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with an accommodation letter. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. You must follow this process for every semester that you request accommodations.

Counseling and Psychological Services

Penn State's Counseling and Psychological Services (CAPS) office offers residential and distance-based Penn State students **non-emergency** mental health services in the form of case management, community resource referrals, supportive listening, care giver support, and much more.

Students may request assistance from CAPS regarding a variety of common mental health issues, including anxiety, depression, relationship difficulties, and stress. CAPS services are designed to enhance students' ability to fully benefit from the University environment and academic experience. Call CAPS at 814-863-0395 (8 am-5 pm, Monday-Friday EST) or **submit an inquiry online** (https://studentaffairs.psu.edu/form/caps-contact-form) at https://studentaffairs.psu.edu/form/caps-contact-form to schedule an appointment with a mental health advocate, who can help you address mental health concerns that may interfere with your academic progress or social development. This appointment will include a one-on-one session that can be conducted via telephone, teleconference (Skype, FaceTime, etc.), or locally at Penn State University Park. For more information on services provided through CAPS, please visit the **Penn State CAPS website** (http://studentaffairs.psu.edu/counseling/) at http://studentaffairs.psu.edu/counseling/. Students enrolled at the World Campus are also encouraged to visit its **Mental Health Services page**

(http://student.worldcampus.psu.edu/student-services/mental-health-services) at http://student.worldcampus.psu.edu/student-services/mental-health-services.

*Reminder: These services are for **non-emergencies** only. If you or someone you know is experiencing a crisis situation, please call your local crisis center or 911.*

Nondiscrimination

Penn State is committed to equal access to programs, facilities, admission and employment for all persons. It is the policy of the University to maintain an environment free of harassment and free of discrimination against any person because of age, race, color, ancestry, national origin, religion, creed, service in the uniformed services (as defined in state and federal law), veteran status, sex, sexual orientation, marital or family status, pregnancy, pregnancy-related conditions, physical or mental disability, gender, perceived gender, gender identity, genetic information or political ideas. Discriminatory conduct and harassment, as well as sexual misconduct and relationship violence, violates the dignity of individuals, impedes the realization of the University's educational mission, and will not be tolerated. For further information, please visit the **Affirmative Action Office website** (https://affirmativeaction.psu.edu/) at https://affirmativeaction.psu.edu/.

Reporting a Bias Incident

Penn State takes great pride to foster a diverse and inclusive environment for students, faculty, and staff. Acts of intolerance, discrimination, or harassment due to age, ancestry, color, disability, gender, gender identity, national origin, race, religious belief, sexual orientation, or veteran status are not tolerated and can be reported through Educational Equity via the **Report Bias webpage** (http://equity.psu.edu/reportbias/) at http://equity.psu.edu/reportbias/.

TEACH Act

The materials on the course website are only for the use of students enrolled in this course for purposes associated with this course and may not be retained or further disseminated.

University Emergency Procedure

In the event of a University-wide emergency, the course may be subject to changes. Exigent circumstances may require alternative delivery methods, class materials, and interactions with the instructor and/or classmates. In addition, there may be revisions to grading policies and the Calendar, including assignments and their due dates.

In the event of a University-wide emergency, please refer to the Canvas website at https://psu.instructure.com for specific information related to the course. For more general information about the emergency situation, please refer to the **Penn State website** (https://www.psu.edu) at https://www.psu.edu or **Penn State News website** (https://news.psu.edu) at https://news.psu.edu.

To register with PSUAlert, a service designed to alert the Penn State community when situations arise that affect the ability of a campus to function normally, please go to the **PSU Alert website (https://psualert.psu.edu/)** at https://psualert.psu.edu/. Subscribers can receive alerts by text message to cell phones, and also can elect to have alerts sent to an email address.

Syllabus Subject to Change

The class will likely adhere to the information outlined in this Syllabus and the Calendar, but adjustments may be made based on what actually transpires during the semester. Remaining in the course after reading this Syllabus will signal that you accept the possibility of changes and responsibility for being aware of them.

Course Summary:

Date	Details	Due
Mon Jan 8, 2024	L01 Begins (https://psu.instructure.com/calendar?event_id=4356684&include_contexts=course_2315145)	12am
	Orientation Begins (https://psu.instructure.com/calendar?event_id=4356679&include_contexts=course_2315145)	12am
Sun Jan 14, 2024	Introductions Discussion (https://psu.instructure.com/courses/2315145/assignments/15562150)	due by 11:59pm
	L01 Check Your Understanding (https://psu.instructure.com/courses/2315145/assignments/15562138)	due by 11:59pm
	L01 Practice Activity (https://psu.instructure.com/courses/2315145/assignments/15562154)	due by 11:59pm
	L01 Reading Quiz (https://psu.instructure.com/courses/2315145/assignments/15562126)	due by 11:59pm
	L01 Statistics Activity (https://psu.instructure.com/courses/2315145/assignments/15562149)	due by 11:59pm
	L01 Statistics in the News (https://psu.instructure.com/courses/2315145/assignments/15562148)	due by 11:59pm

Date	Details	Due
	Practice File Upload (https://psu.instructure.com/courses/2315145/assignments/15562168)	due by 11:59pm
Mon Jan 15, 2024	L02 Begins (https://psu.instructure.com/calendar?event_id=4356680&include_contexts=course_2315145)	12am
Sun Jan 21, 2024	L02 Check Your Understanding: Identifying Research Question and Variables (https://psu.instructure.com/courses/2315145/assignments/15562128)	due by 11:59pm
	L02 Controlling for Confounding Variables (https://psu.instructure.com/courses/2315145/assignments/15562151)	due by 11:59pm
	L02 Deterministic Activity (https://psu.instructure.com/courses/2315145/assignments/15562147)	due by 11:59pm
	L02 Reading Quiz (https://psu.instructure.com/courses/2315145/assignments/15562127)	due by 11:59pm
	L02 Stata Assignment (https://psu.instructure.com/courses/2315145/assignments/15562155)	due by 11:59pm
	L02 The Importance of .do Files: Practice (https://psu.instructure.com/courses/2315145/assignments/15562156)	due by 11:59pm
Mon Jan 22, 2024	L03 Begins (https://psu.instructure.com/calendar?event_id=4356681&include_contexts=course_2315145)	12am
Sun Jan 28, 2024	L03 Check Your Understanding: Levels of Measurement (https://psu.instructure.com/courses/2315145/assignments/15562129)	due by 11:59pm
	L03 Concept Tree (https://psu.instructure.com/courses/2315145/assignments/15562152)	due by 11:59pm
	L03 Reading Quiz	due by 11:59pm

Date	Details	Due
	(https://psu.instructure.com/courses/2315145/assignments/15562132)	
	L03 Stata Assignment (https://psu.instructure.com/courses/2315145/assignments/15562157)	due by 11:59pm
	L03 Systemic Measurement Discussion (https://psu.instructure.com/courses/2315145/assignments/15562146)	due by 11:59pm
Mon Jan 29, 2024	L04 Begins (https://psu.instructure.com/calendar?event_id=4356673&include_contexts=course_2315145)	12am
Sun Feb 4, 2024	L04 Check Your Understanding: Descriptive Statistics (https://psu.instructure.com/courses/2315145/assignments/15562142)	due by 11:59pm
	L04 Reading Quiz (https://psu.instructure.com/courses/2315145/assignments/15562136)	due by 11:59pm
	L04 Stata Assignment: Cleaning and Visualizing Data in Stata (https://psu.instructure.com/courses/2315145/assignments/15562158)	due by 11:59pm
Mon Feb 5, 2024	L05 Begins (https://psu.instructure.com/calendar?event_id=4356676&include_contexts=course_2315145)	12am
Sun Feb 11, 2024	L05 Check Your Understanding: Confidence Intervals (https://psu.instructure.com/courses/2315145/assignments/15562134)	due by 11:59pm
	L05 Reading Quiz (https://psu.instructure.com/courses/2315145/assignments/15562123)	due by 11:59pm
	L05 Stata Assignment: Cleaning and Visualizing Data (https://psu.instructure.com/courses/2315145/assignments/15562159)	due by 11:59pm
Sun Feb 18, 2024	Exam 1	due by 11:59pm

Date	Details	Due
	(https://psu.instructure.com/courses/2315145/assignments/15562141)	
Mon Feb 19, 2024	L06 Begins (https://psu.instructure.com/calendar?event_id=4356685&include_contexts=course_2315145)	12am
Sun Feb 25, 2024	L06 Reading Quiz (https://psu.instructure.com/courses/2315145/assignments/15562133)	due by 11:59pm
	L06 Stata Assignment: Introduction to Hypothesis Testing (https://psu.instructure.com/courses/2315145/assignments/15562160)	due by 11:59pm
Mon Feb 26, 2024	L07 Begins (https://psu.instructure.com/calendar?event_id=4356677&include_contexts=course_2315145)	12am
Sun Mar 3, 2024	L07 Reading Quiz (https://psu.instructure.com/courses/2315145/assignments/15562145)	due by 11:59pm
	L07 Stata Assignment (https://psu.instructure.com/courses/2315145/assignments/15562161)	due by 11:59pm
Mon Mar 4, 2024	Spring Break! (https://psu.instructure.com/calendar?event_id=4356696&include_contexts=course_2315145)	12am
Mon Mar 11, 2024	L08 Begins (https://psu.instructure.com/calendar?event_id=4356678&include_contexts=course_2315145)	12am
Sun Mar 17, 2024	L08 Check Your Understanding: Correlation (https://psu.instructure.com/courses/2315145/assignments/15562137)	due by 11:59pm
	L08 Reading Quiz (https://psu.instructure.com/courses/2315145/assignments/15562143)	due by 11:59pm
	L08 Stata Assignment: Correlation Coefficients (https://psu.instructure.com/courses/2315145/assignments/15562163)	due by 11:59pm

Date	Details	Due
Sun Mar 24, 2024	Exam 2 (https://psu.instructure.com/courses/2315145/assignments/15562140)	due by 11:59pm
Mon Mar 25, 2024	L09 Begins (https://psu.instructure.com/calendar?event_id=4356682&include_contexts=course_2315145)	12am
Sun Mar 31, 2024	L09 Check Your Understanding: Estimating Beta-Hat (https://psu.instructure.com/courses/2315145/assignments/15562131)	due by 11:59pm
	L09 Reading Quiz (https://psu.instructure.com/courses/2315145/assignments/15562144)	due by 11:59pm
	L09 Stata Assignment: Bivariate Regression (https://psu.instructure.com/courses/2315145/assignments/15562164)	due by 11:59pm
Mon Apr 1, 2024	L10 Begins (https://psu.instructure.com/calendar?event_id=4356675&include_contexts=course_2315145)	12am
Sun Apr 7, 2024	L10 Check Your Understanding: Calculating R2 (https://psu.instructure.com/courses/2315145/assignments/15562130)	due by 11:59pm
	L10 Check Your Understanding: Calculating the Root MSE (https://psu.instructure.com/courses/2315145/assignments/15562125)	due by 11:59pm
	L10 Check Your Understanding: Calculating the RSS and R2 from the RSS (https://psu.instructure.com/courses/2315145/assignments/15562139)	due by 11:59pm
	L10 Stata Assignment: Bivariate Regression (https://psu.instructure.com/courses/2315145/assignments/15562165)	due by 11:59pm
Mon Apr 8, 2024	L11 Begins (https://psu.instructure.com/calendar?	12am

Date	Details	Due
	event_id=4356686&include_contexts=course_2315145)	
Sun Apr 14, 2024	L11 Multiple Regression Extra Credit Assignment (https://psu.instructure.com/courses/2315145/assignments/15562124)	due by 11:59pm
	L11 Reading Quiz (https://psu.instructure.com/courses/2315145/assignments/15562135)	due by 11:59pm
	L11 Stata Assignment (https://psu.instructure.com/courses/2315145/assignments/15562166)	due by 11:59pm
Mon Apr 15, 2024	L12 Begins (https://psu.instructure.com/calendar?event_id=4356683&include_contexts=course_2315145)	12am
Sun Apr 21, 2024	L12 Reading Quiz (https://psu.instructure.com/courses/2315145/assignments/15562122)	due by 11:59pm
	L12 Stata Assignment: Evaluating a Regression (https://psu.instructure.com/courses/2315145/assignments/15562167)	due by 11:59pm
Sun Apr 28, 2024	Take Home Multiple Regression Assignment (https://psu.instructure.com/courses/2315145/assignments/15562169)	due by 11:59pm
	Take Home Multiple Regression Assignment (https://psu.instructure.com/courses/2315145/assignments/15562170)	due by 11:59pm