INTL 4000	Research Design and Analysis for IA	Spring 2026
M/W/F 9:55-10:50	109 Sanford Hall	Pre/Corequisites: None
Danny Hill	Dept. of International Affairs	dwhill@uga.edu
Office Hrs: Wednesday, 2:00–4:00	Office: 319 IA Building	

Course Description

This course introduces students to philosophy of science, research design, and quantitative analysis as applied to the study of comparative and international politics. Topics covered include conceptualization, measurement, causal theories in social science, basic descriptive and inferential statistics, data visualization, measures of bivariate association, and multivariate linear regression.

Course Objectives

This course exposes students to concepts related to theory, research design, and quantitative analysis in the social sciences. The first part of the course addresses concepts and measurement in research on international and comparative politics. The rest of the course familiarizes students with basic concepts from statistics, and introduces them to the use of statistical software for data analysis and visualization. Students will develop an understanding of the fundamental components of social scientific research, including conceptualization and quantitative measurement, as well as how causal theories can be constructed and tested in the social sciences. Students will learn to perform data analysis, including descriptive and inferential analysis. By the end of the course, students will be comfortable creating graphical displays and performing formal analysis to examine relationships between variables, including cross-tabulation and linear regression. The bulk of students' grades will be determined by lab reports that involve data analysis.

Required Texts

You are not required to purchase any textbooks for this course. All readings will be available through the eLC course site or the UGA library's website.

Grades

Your grades will be based on five lab reports, including a summary report to be submitted near the end of the semester, and a final exam. The first four lab reports will count towards 15% of your final grade, and the final report and final exam will each count towards 20% of your final grade.

Grade Distribution (note that I do not assign minus grades):

90 - 100: A	
86 - 89: B+	80 - 85: B
76 - 79: C+	70 - 75: C
66 - 69: D+	60 - 65: D
below 60: F	

Lab Reports

The majority of your grade in this course is determined by five lab reports. For each lab report, you will work together in assigned groups, which will be determined by January 28th. We will spend a good bit of class time working on each report. Each assignment will build directly on the previous one, and the final report each group submits near the end of the semester will combine and summarize the analysis you've conducted over the course of the semester. During the week of April 6-10, I will meet individually with each group to discuss progress towards your final report.

These assignments will require you to conduct statistical analysis using a (free) software program called R. You will need to download and install the program by January 26th, when we will complete an in-class exercise to familiarize everyone with the software.

Due dates for your lab reports are:

- Monday, February 9th: Summary of topic, research question, and descriptive analysis
- Friday, February 20th: Preliminary analysis using contingency tables
- Monday, March 2nd: Preliminary analysis using bivariate linear regression
- Friday, March 27th: Preliminary analysis using bivariate hypothesis tests
- Monday, April 20th: Final report, which includes:
  - All previous analysis
  - Multivariate linear regression
  - Summary of key results

Final Exam

The final exam in this course will consist of 10-15 questions that will involve some quantitative reasoning and math. You will be allowed to use a calculator. Exams will cover material from class as well as assigned readings. The final exam will be on Wednesday, April 29th from 8:00 a.m. to 11 a.m.

Course Website and Email

Can be accessed through www.elc.uga.edu. You will need to check this site regularly for any syllabus updates, posted readings, and other materials I will post. Announcements may also be sent out via email.

Syllabus Change Policy

The course syllabus is a general plan for the course; deviations may be necessary. I'll let you know if the schedule changes.

Use of Generative AI Tools

Text-generating "chatbots" like Chat GPT can be useful for research tasks, including statistical analysis. I encourage students to consult internet resources, including but not limited to generative AI tools, to accomplish specific, well-defined tasks for the analyses you will conduct in this class. However, I strongly discourage the use of generative AI for formulating basic research questions, arguments, and making general decisions about which data to analyze and how to analyze it, for two reasons. One, it is not very good at these things. Two, if you are not willing to engage in these tasks yourself, you will not develop any real skills in this course. Though I don't have any direct proof, I strongly suspect that a heavy reliance on these tools will eventually cause your brain to atrophy and also significantly decrease your prospects for gainful employment after graduation.

Students with Disabilities

Students with disabilities who require reasonable accommodations in order to participate in course activities or meet course requirements should contact the instructor or designate during regular office hours or by appointment.

Well-being, Mental Health, and Student Support

If you or someone you know needs assistance, you are encouraged to contact Student Care and Outreach in the Division of Student Affairs at 706-542-7774 or visit their webpage. They will help you navigate any difficult circumstances you may be facing by connecting you with the appropriate resources or services. UGA has several resources to support your well-being and mental health. Find out more here.

Counseling and Psychiatric Services (CAPS) is your go-to, on-campus resource for emotional, social and behavioral-health support. For crisis support see this page. The University Health Center offers FREE workshops, classes, mentoring and health coaching led by licensed clinicians or health educators. See here for more.

University Honor Code/Academic Honesty Policy

As a University of Georgia student, you have agreed to abide by the University's academic honesty policy, "A Culture of Honesty," and the Student Honor Code. All academic work must meet the standards described in "A Culture of Honesty" found at https://honesty.uga.edu/academic-honesty-policy/. Lack of knowledge of the academic honesty policy is not a reasonable explanation for a violation. Questions related to course assignments and the academic honesty policy should be directed to the instructor.

Withdrawal Policy

Students who withdraw from the class before the withdrawal deadline (Thursday, April 9th) are assigned a grade based on their performance (pass/fail) in the class up the point of withdrawal. This means that students who are failing will be assigned a "WF" grade even if they withdraw before the deadline. Students who withdraw from the class after the withdrawal deadline are automatically assigned a "WF" grade upon withdrawal.

Reading Schedule

Concepts and theory in social sciences

Monday January 12: Syllabus review, class overview. No reading.

Wednesday January 14: Munck, Gerardo L. and Jay Verkuilen. 2002. "Conceptualizing and Measuring Democracy: Evaluating Alternative Indices." *Comparative Political Studies* 35(1): 5-34.

Friday January 16: Oneal, John R. and Bruce M. Russett. 1997. "The Classical Liberals Were Right Democracy, Interdependence, and Conflict, 1950-1985." *International Studies Quarterly* 41(2): 267-293.

Schultz, Kenneth A. 1999. "Do Democratic Institutions Constrain or Inform? Contrasting Two Institutional Perspectives on Democracy and War." *International Organization* 53(2): 233-266.

Descriptive statistics

Monday January 19: MLK day, no class

Wednesday January 21: Agresti and Finlay, pp. 12-17, chap 3.

Friday January 23: Agresti and Finlay, pp. 12-17, chap 3.

Overview of lab report requirements and data.

Measurement and descriptive statistics, cont'd

Monday January 26: Agresti and Finlay, pp. 12-17, chap 3.

Lab exercise. You will complete this exercise by yourself (no group work). This is just to familiarize yourself with R and with the dataset you will use for your assignments. You will need your laptop

and must have R installed before class begins.

Wednesday January 28: *Lab exercise.* Each group will work together to pick a topic for their final report, and to formulate a research question. You don't have to use R for this.

Friday January 30: *Lab exercise.* Each group will examine descriptive statistics for the variable(s) relevant to their project and begin writing their first lab report (due Monday, February 9th).

Probability distributions

Monday February 2: Agresti and Finlay, chap 4.

Wednesday February 4: Agresti and Finlay, chap 4.

Friday February 6: *Lab exercise.* With your group, you will continue the work you began the previous week. The first lab report, which should include a description of your topic, research question, and some descriptive information about the variable(s) you will use, is due Monday, February 9th.

Contingency tables

Monday February 9: Agresti and Finlay, chap 8.

First lab report due by 11:59 p.m.

Wednesday February 11: Agresti and Finlay, chap 8.

Friday February 13: *Lab exercise.* Each group will create contingency tables and plots to examine relationships between variables in the dataset, including the ones you have chosen for your reports. Results for your variables will be summarized in the second lab report, due Friday, February 20th.

Introduction to linear regression analysis

Monday February 16: Agresti and Finlay, pp. 255-276.

Wednesday February 18: Agresti and Finlay, pp. 255-276.

Friday February 20: *Lab exercise.* You will work with your group to create scatterplots and other bivariate plots, and output from a bivariate regression model. You will use some variables chosen by me, as well as the ones relevant to your lab reports. This analysis will be summarized in the third lab report, due on Monday, March 2nd.

Second lab report due by 11:59 p.m.

Confidence intervals and hypothesis tests

Monday February 23: Agresti and Finlay, chap 5.

Wednesday February 25: Agresti and Finlay, chap 5.

Friday February 27: Agresti and Finlay, chap 5.

Monday March 2: Agresti and Finlay, chap 6.

Third lab report due by 11:59 p.m.

Wednesday March 4: Agresti and Finlay, chap 6.

Friday March 6: Agresti and Finlay, chap 6.

Spring Break, March 9-13

Tests for bivariate associations

Monday March 16: Agresti and Finlay, chap 7, pp. 233-237, 239-243.

Wednesday March 18: Agresti and Finlay, chap 7, pp. 233-237, 239-243.

Friday March 20: *Lab exercise.* You will work with your group to produce bivariate hypothesis tests using some of the variables in the lab data, including the ones you are using for your reports. Results for your variables will be summarized in the fourth lab report, due on Friday, March 27th.

Linear regression analysis

Multivariate regression and hypothesis testing

Monday March 23: Agresti and Finlay, chap 10.

Wednesday March 25: Agresti and Finlay, chap 10.

Friday March 27: *Lab exercise.* Each group will begin building the multivariate regression model for their final lab report, due Monday, April 20th.

Fourth lab report due by 11:59 p.m.

Monday March 30: Agresti and Finlay, chap 11.

Wednesday April 1: Agresti and Finlay, chap 11.

Friday April 3: *Lab exercise.* You will continue work from the previous week, and start to finalize your model for the final lab report, due Monday, April 20th.

Model fit

During this week, I will meet with each group separately to discuss progress towards your final report and answer any questions you have.

Monday April 6: Agresti and Finlay, chap 11.

Wednesday April 8: Agresti and Finlay, chap 11.

Friday April 10: *Lab exercise.* Groups will continue working on their multivariate models and examine how well they fit the data. A summary of model fit will be included in the final report, due on Monday, April 20th.

Nonlinear relationships

Monday April 13: Agresti and Finlay, chap 11.

Wednesday April 15: Agresti and Finlay, chap 11.

Friday April 17: *Lab exercise.* Groups will continue working on their multivariate models and examine the possibility of nonlinear relationships. Inclusion of this analysis in the final report is optional.

Monday April 20: Course review, no reading.

Final lab report due by 11:59 p.m.

Wednesday April 22: Course review, no reading.

Friday April 24: Course review, no reading.

Final Exam Wednesday, April 29 at 8:00 a.m. (not my call)