Overview

This course is designed to introduce you to understanding empirical research in international affairs. In this seminar you will learn how to correctly consume and understand empirical research designs and how to conduct simple statistical tests and produce basic data visualizations. Topics to be covered include:

- Philosophy of Science
- The fundamentals of research design
- Basics of data visualization
- Introduction to the R programming language

This seminar meets weekly for 2.75 hours. While discussion is welcome, class size constraints and presentation of the material may necessitate lectures and Socratic methodologies. You must come to class having read all material assigned for that week ready to discuss in detail what you have gleaned from the reading. Discussion is expected to be critical and in depth. You are expected to go beyond the mere superficial what of the reading to a critical analysis of why, how, under what conditions, and so what.

In addition, because this is a graduate seminar where discussion is necessary to facilitate learning, I will not provide virtual attendance options, nor will seminars be recorded or made available online. If students need to miss a seminar due to sickness or other reasons, they are encouraged to obtain notes from a classmate, or visit the professor or TA during office hours to ask any questions.

Material

Required Texts


Recommended Reference Texts


Grading Scheme

- 5% Discussion Positions
- 20% Homework
- 25% Midterm Exam
- 25% Policy Memo Rough Draft
- 25% Policy Memo

Grades will follow the standard scale: A = 100-90; B = 89-80; C = 79-70, D = 69-60, F = < 50.

Learning Objectives

- Students will be able to apply basic statistical skills to include quantitative and qualitative methodologies in academic and professional contexts within the field of international affairs.
- Students will be able to demonstrate knowledge of principal contemporary global challenges in the field of international security.
- Students will be able to apply research skills to address problems in the field of international affairs.

Midterm Exam

Students will complete a take home midterm to be distributed by the professor. Exams will primarily test student’s critical thinking skills. Students will have two weeks to complete their exam. More detailed instructions will be released with the exam.

Homework

There will be 3 homework assignments during the semester. These homework assignments will assess student’s abilities in the R programming environment. More detailed instructions will follow each individual assignment. Students have two weeks to complete each assignment. All assignments should be completed individually. A “rough draft” of each assignment is due one week from the assigned date. The professor or TA will grade and comment on the rough draft before returning to the student for revision and final submission. Grades for the homework assignments will be weighted 0.33 for the rough draft and 0.67 for the final. Students are expected to incorporate all feedback in the final draft to receive maximum credit. All homework must be submitted in R Markdown .html format or students will be given a grade of zero.

Policy Memo

Students will be given a selection of literature and asked based on the empirical conclusions contained to provide a policy memo to their superiors at the State Department, World Bank, or Intelligence Community. These memos should be a succinct recommendation to their superiors to take a particular course of action based on their knowledge of the empirical research in a given subfield. Students will be given a simulated scenario prompt and will respond to the prompt with critical, in depth, original analysis for that scenario. These memos are not meant to be book reports or summaries of the given reading, but must show evidence of original critical analysis connecting the diverse themes, hypotheses, and methodologies across their required readings to provide a well reasoned policy action to the given prompt. Students will have the opportunity to present a rough draft of this Policy Memo earlier in the semester, receive feedback from the professor, and make associated changes based on feedback before final submission.

FAQs

What Does Research Design Mean?

Research design is absolutely fundamental for establishing basic knowledge. Opportunities for meaningful employment in this field will come from honing a set of skills. These skills include effective written and oral communication, but also analysis. What evidence can you provide to support your argument?

Why Should I Care about Methodology?

Understanding how to design a rigorous research study is a key skill to master not only for those looking for academic careers, but for those looking to engage with government, private, and non-profit work as well. The ability to understand measurement, control over variables, probability, sampling, randomization, and other research fundamentals will assist you in thinking critically through what can be dense and esoteric topics.

I Have No Programming Experience?

It is normal for many first-year graduate students to be surprised at the gulf between what is taught at the undergraduate level and what is expected at the graduate level. This course will introduce you to some basic programming skills, and fortunately, the ecosystem surrounding quantitative social science has rapidly expanded in the last decade, and many excellent reference books are easily available for no cost. Sites like Stack Overflow or Stack Exchange are also invaluable for beginners looking to understand how to improve their skills.
Discussion Positions

Students will submit via Canvas, and present at the beginning of a scheduled seminar, a critical reflection on that seminar’s reading. Discussion assignments will be provided at the beginning of Week 2. These discussion positions should discuss the merits and/or faults including a discussion of research design, implementation, methodology, and conclusions, of each week’s reading to demonstrate a thorough understanding of the material. Each position should be no longer than 3 pages, standard formatting rules apply. These discussion positions will provide an introduction to each week’s seminar discussion.

Make-up Policy and Late Work

Make-up assignments and exams will not be permitted unless in case of legitimate medical or other concerns which should be discussed privately with the professor to determine legitimacy. If an extension is granted, work must be submitted by that time. If a student submits late work without notifying the professor of any change in circumstances, such work will not be accepted and receive a score of zero.

Diversity and Inclusivity Statement

The Institute does not discriminate against individuals on the basis of race, color, religion, sex, national origin, age, disability, sexual orientation, gender identity, or veteran status in the administration of admissions policies, educational policies, employment policies, or any other Institute governed programs and activities. The Institute’s equal opportunity and non-discrimination policy applies to every member of the Institute community. The Institute’s affirmative action program, Title IX program, and related policies are developed in compliance with applicable law. Pursuant to Title IX, the Institute does not discriminate on the basis of sex in its education programs and activities. As such, the Institute does not tolerate any kind of gender-based discrimination or harassment, which includes sexual violence, sexual harassment, and gender-based harassment. Inquiries concerning the Institute’s application of or compliance with Title IX may be directed to the Title IX Coordinator, Burns Newsome, burnsnewsome@gatech.edu, 404-385-5151. Additionally, inquiries concerning the application of applicable federal laws, statutes, and regulations (such as Title VI, Title IX, and Section 504) may be directed to the U.S. Department of Education’s Office of Civil Rights at www2.ed.gov/ocr.

Accommodations for Students with Disabilities

Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, students must register with the Office of Disability Services at Suite 123, Smithgall Student Services Building, 353 Ferst Drive, 404-894-2563 (Voice); 404-894-1664 (TDD). For more information on Georgia Tech’s policy on working with students with disabilities, please see review the Office of Disability Service’s web page at https://policies.ncsu.edu/regulation/reg-02-20-01/ The Office of Disability Services collaborates with students, faculty, and staff to create a campus environment that is usable, equitable, sustainable and inclusive of all members of the Georgia Tech community. Disability as an aspect of diversity that is integral to society and Georgia Tech. If students encounter academic, physical, technological, or other barriers on campus, the Disability Services team is available to collaboratively find creative solutions and implement reasonable accommodations.

Academic Integrity

Academic dishonesty in the form of cheating or plagiarism will not be tolerated. In brief, plagiarism is defined, for the purposes of this class, as: copying, borrowing, or appropriating another entity’s work and presenting it as your own in any submitted assignment, deliberately or by accident. Acts of plagiarism will be reported in accordance with the Honor Code. In order to avoid being charged with plagiarism, if you use the words, ideas, phrasing, charts, graphs, or data of another person or from published material, then you must either: 1) use quotation marks around the words and cite the source, or 2) paraphrase or summarize acceptably using your own words and cite the source. The plagiarism policy is not restricted to books, but also applies to video and audio content, websites, blogs, wiki’s, AI generated content like Chat-GPT, and podcasts. Plagiarism includes putting your name on a group project to which you have minimally contributed. For information on Georgia Tech’s Academic Honor Code, please visit http://www.catalog.gatech.edu/policies/honor-code/ or http://www.catalog.gatech.edu/rules/18/ Any student suspected of cheating or plagiarizing on a assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations. The student will also receive a grade of zero on the assignment at the professor’s discretion.
## MODULE 1: Philosophy of Science

### Aug 23  Introduction

**REQUIRED READING**


- Ashworth, Berry, and Bueno de Mesquita (Ashworth et al.) Chs. 1-2

- Chalmers. Chs. 1-3

- King, Keohane, and Verba (KKV) Ch. 1


- Imai and Williams Ch. 1 (skim – work through in Lab)

- Healy Ch. 2 (skim – work through in Lab)

**R Lab #1: Basic Commands, Libraries, Directories, and other Fundamentals**

**RECOMMENDED READING**


### Aug 30  Understanding Reasoning

**REQUIRED READING**

Chalmers Chs. 4-7

KKV Ch. 2


**R Lab #2: Introduction to Datasets and Codebooks**

**Homework # 1 Assigned**

**RECOMMENDED READING**


**Sept 6 Scientific Advancement**

**REQUIRED READING**

Chalmers Ch. 8-10


KKV Ch. 3


**RECOMMENDED READING**


---

**Sept 13**  Experimentation

**REQUIRED READING**

Ashworth et al. Ch. 3-4

Chalmers Chs. 11-13


KKV Ch. 4


**Homework #2 Assigned**

**ADDITIONAL READING**


Sept 20 Explanation REQUIRED READING


Chalmers Chs. 14-15


ADDITIONAL READING


<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Required Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct 11</td>
<td>Research Design: Case Studies</td>
<td>Travel for Conference, no Seminar&lt;br&gt;REQUIRED READING</td>
</tr>
<tr>
<td>Oct 18</td>
<td>Research Design: Survey Research</td>
<td>REQUIRED READING</td>
</tr>
<tr>
<td>--------</td>
<td>----------------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td></td>
<td>Ashworth et al. Ch. 7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>King, Keohane, and Verba Ch. 6</td>
<td></td>
</tr>
</tbody>
</table>

**Policy Memo Rough Drafts Assigned**

<table>
<thead>
<tr>
<th>Oct 25</th>
<th>Research Design: Qualitative Methods</th>
<th>REQUIRED READING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ashworth et al. Ch. 9</td>
<td></td>
</tr>
</tbody>
</table>

**ADDITIONAL READING**


### MODULE 3: Programming with R

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Reading Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov 1</td>
<td>Intro to Object-Oriented Programming</td>
<td>REQUIRED READING</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Imai and Williams Ch. 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Goertz Chs. 1-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Healy Ch. 1-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>R Lab #3: Object Orientated Programming</strong></td>
</tr>
<tr>
<td>Nov 8</td>
<td>Database Management Skills</td>
<td>REQUIRED READING</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Imai and Williams Ch. 3-4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Goertz Ch. 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>ADDITIONAL READING</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>R Lab # 4: Database Management in Tidyverse</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Homework #3 Assigned</td>
</tr>
<tr>
<td>Nov 15</td>
<td>Intro to Probability</td>
<td>REQUIRED READING</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Imai and Williams Ch. 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TBD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Goertz Ch. 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>R Lab 5: Bi-variate Statistical Tests</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Policy Memo Rough Drafts Due</td>
</tr>
<tr>
<td>Nov 22</td>
<td>Regression and Visualization</td>
<td>Thanskgiving Break</td>
</tr>
<tr>
<td></td>
<td></td>
<td>REQUIRED READING</td>
</tr>
<tr>
<td>Date</td>
<td>Topic</td>
<td>References</td>
</tr>
<tr>
<td>----------</td>
<td>--------------------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td><strong>Nov 29</strong></td>
<td>Regression and Visualization II</td>
<td>Imai and Williams Chs. 6-7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Healy Chs 3-4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Goertz Ch. 5-6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Week 16</strong></td>
<td>FINAL EXAM</td>
<td>Goertz Chs. 7-8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Healy Ch. 5-6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>