

# INTL 7000: Data Analytics and Presentation for International Policy Professionals

Mondays, 12:20-3:20 pm

MLC 350

Spring 2020

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Office Hours: 3:30 to 5:00 pm Mondays and other times by appointment

## Course Description and Objectives

As an international policy professional, you will have to be up-to-date on data projects that could influence international policy and how to present data within the policy community. This course provides you with tools that will help you find, critically examine, analyze, and present international policy data to a broad community. Although the focus will be on data analytics, **no background in statistics is expected or required**. We will be using multiple data software tools to help you work with existing datasets and/or create your own data for the policy community. Each week will focus on different datasets and data structures that you could be using as a policy professional. Whenever possible, I will organize Q-&-A Skype sessions with policy professionals where we will ask them questions about how they use data in their current careers.

## Grading

Your course grade is calculated from the following components:

- **55%** - Practice Sets
- **10%** - Critical Review of Existing Dataset
- **25%** - Final Policy Memo
- **10%** - Active Participation

## Practice Problem Sets

Throughout the semester, you will be required to “get your hands dirty” with existing data and examine an existing dataset and provide some answers to policy questions using the data. Some of these assignments will be completed in class; other assignments will require work between classes.

## Critical Review of Existing Dataset

An important part of understanding data is understanding where it comes from and the decisions that go into making a dataset. This assignment will be completed in pairs. In this assignment, you and a partner will review a dataset and a codebook and evaluate the dataset. You and your partner will write an outline about the dataset and present about the dataset in class (<10 minute presentation). A rubric will be provided for this assignment in the first few weeks of class.

## Final Policy Memo

Using the tools we have discussed in class, you will prepare a 5-10 page policy memo on a topic of your choice that makes extensive use of the tools discussed in class. A rubric will be provided for this assignment in the first few weeks of class.

## Grading Scale:

Your final grade will be calculated on the following scale:

- 94 to 100 - A
- 90 to 93.9̄ - A-
- 87 to 89.9̄ - B+
- 84 to 86.9̄ - B
- 80 to 83.9̄ - B-
- 77 to 79.9̄ - C+
- 74 to 76.9̄ - C
- 70 to 73.9̄ - C-
- 60 to 69.9̄ - D
- 59 and below - F

## Useful Information and University Policies

### Attendance and Missing Class

I realize you are adults with rich and full lives outside of class. As such, I do not have an attendance policy, *per se*. You are solely responsible for getting any materials you miss. However, it's **very** hard to get the participation points and do some of the problem sets if you aren't in class.

### University Honor Code and Academic Honesty Policy

The following is taken verbatim from <https://curriculumsystems.uga.edu/curriculum/courses/syllabus>:

“UGA Student Honor Code: "I will be academically honest in all of my academic work and will not tolerate academic dishonesty of others." A Culture of Honesty, the University's policy and procedures for handling cases of suspected dishonesty, can be found at [www.uga.edu/ovpi](http://www.uga.edu/ovpi).”

## Changes to the Syllabus Could Occur

The following is taken verbatim from <https://curriculumsystems.uga.edu/curriculum/courses/syllabus>:

“The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.”

**Because this course is for your benefit as a policy professional, certain readings and activities may change as the course progresses.**

## Disability Services

The following is taken verbatim from [https://drc.uga.edu/content\\_page/sample-access-statements](https://drc.uga.edu/content_page/sample-access-statements):

“If you plan to request accommodations for a disability, please register with the Disability Resource Center. They can be reached by visiting Clark Howell Hall, calling 706-542-8719 (voice) or 706-542-8778 (TTY), or by visiting <http://drc.uga.edu>”

The following is taken verbatim from <https://online.uga.edu/documents/ugasyllabusguidelines.pdf>:

“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.”

## Useful Campus Resources

There are many campus resources that can help you with your academic performance and assist you during the semester. I urge you to check out the Division of Academic Enhancement and the Writing Center.

Some material in this course contains references to violence. You are always welcome to excuse yourself during class for any reason, and I urge you to take your health seriously. There are campus resources to help.

## Course Readings and Software

No book purchases are necessary for this class. All of the readings come from academic journal articles, online materials, and book chapters. If the readings cannot be easily downloaded from Google Scholar on campus, readings can be found on the eLearningCommons page for this course. I expect you to have completed the readings **before** coming to each week’s class.

This course will use R and Stata software packages. R is free. Stata is fairly cheap for a semester (as low as \$48 for 6 months). I urge you to purchase a perpetual license (\$225) so that you can use these tools later on. You have access to R and Stata through the vLab: <https://eits.uga.edu/support/vlab/>. I also encourage you to use RStudio (also free).

## Class Outline

### January 13th: Introduction to Course and Why Data in the Policy Community

- **Goals: Set up course, introduction, expectations for semester**
- Cukier, Kenneth, and Viktor Mayer-Schoenberger. 2013. "The rise of big data: How it’s changing the way we think about the world." *Foreign Affairs* 92:28.

## January 20th: No class - Martin Luther King, Jr. Day

## January 27th: What Can We Do With Data? A Beginner's Guide to Stata

- **Goals: Begin using Stata, understand how to import data or create data in Stata, where to go to get help, how to summarize data, creating do and log files for your work with data**
- Zahn, Ista. 2018. "Introduction to Stata." <http://tutorials.iq.harvard.edu/Stata/StataIntro/StataIntro.html>
- Rodriguez, German. 2017. "Stata Tutorial." <https://data.princeton.edu/stata/tutorial.pdf>
- Fuhrmann, Matthew and Benjamin Tkach. 2015. "Almost Nuclear: Introducing the Nuclear Latency Dataset." *Conflict Management and Peace Science* 32 (4): 443-461.
  - This will be the dataset we will use for most of the examples for the next two weeks.
- Fuhrmann, Matthew. 2016. "The Nuclear Latency Dataset: Codebook." [http://www.matthewfuhrmann.com/uploads/\\_codebook\\_2015-1215.pdf](http://www.matthewfuhrmann.com/uploads/_codebook_2015-1215.pdf)

## February 3rd: What Can We Do With Data? A Beginner's Guide to R

- *Guest Visit from Dena Kimball, Executive Director of The Kendeda Fund*
- **Goals: Begin using R, understand how to import data or create data in R, where to go to get help, what makes R different than Stata, creating log files for your work with data**
- "Introduction to R workshop notes." 2018. <http://tutorials.iq.harvard.edu/R/Rintro/Rintro.html>
- Paradis, Emmanuel. "R for Beginners." [https://cran.r-project.org/doc/contrib/Paradis-rdebuts\\_en.pdf](https://cran.r-project.org/doc/contrib/Paradis-rdebuts_en.pdf)
- Great overviews of differences between R and Stata and some basic commands: <https://www.princeton.edu/~otorres/RStata>, [http://rslblissett.com/wp-content/uploads/2016/09/RTutorial\\_160930.pdf](http://rslblissett.com/wp-content/uploads/2016/09/RTutorial_160930.pdf)

## February 10th: Time-Series Cross-Sectional Data (Economic, Regimes) & Understanding Statistical Tables

- *Skype Call from Katherine L. Kidder, Associate Political Scientist, RAND Corporation*
- **Goals: Continue our work with both R and Stata, review basic social science statistics, run statistical models in both Stata and R**
- UK Government Statistical Service. "Statistics for policy professionals: things that you need to know." [https://gss.civilservice.gov.uk/wp-content/uploads/2018/05/Guidance-on-Statistics-for-Policy-Professionals-v1.0\\_FINAL.pdf](https://gss.civilservice.gov.uk/wp-content/uploads/2018/05/Guidance-on-Statistics-for-Policy-Professionals-v1.0_FINAL.pdf)
- Gallo, Amy. 2015. "A refresher on regression analysis." *Harvard Business Review* <https://hbr.org/2015/11/a-refresher-on-regression-analysis>
- Fuhrmann, Matthew. 2012. "Splitting Atoms: Why Do Countries Build Nuclear Power Plants?" *International Interactions* 38 (1): 29-57.
- Jo, Dong-Joon, and Erik Gartzke. 2007. "Determinants of nuclear weapons proliferation." *Journal of Conflict Resolution* 51(1): 167-194.

### Related Datasets:

- Qualities of Governance Time-Series Dataset
  - <https://qog.pol.gu.se/data/datadownloads/qogstandarddata>
- Polity
  - <http://www.systemicpeace.org/polityproject.html>
- Varieties of Democracy
  - <https://www.v-dem.net/en/>
- AidData
  - <http://aiddata.org/>
- CIRI Human Rights Dataset
  - <http://www.humanrightsdata.com/p/data-documentation.html>

### February 17th: Time-Series Cross-Sectional Data (Violence) & Visualization

- *Skype Call from Thomas R. Guarrieri, Ph.D. Assistant Research Scientist, National Consortium for the Study of Terrorism and Responses to Terrorism*
- **Goals: Learn how to merge data from two or more datasets into one data file, how to collapse or change lengths of time (moving from events to years), explore visual representations of data (both with and without statistical modeling)**
- Early, Bryan R., Matthew Fuhrmann, and Quan Li. 2013. "Atoms for Terror? Nuclear Programs and Noncatastrophic Nuclear and Radiological Terrorism," *British Journal of Political Science* 43 (4): 915-936.
- Blake Campbell & Amanda Murdie. 2019. "Keep the Informants Talking: The Pursuit and Use of CBRN Weapons by Terrorist Organizations." *Studies in Conflict & Terrorism*. Forthcoming.
- Global Terrorism Database: <https://www.start.umd.edu/gtd/>

### Related Datasets:

- International Military Intervention Dataset
  - <https://www.k-state.edu/polsci/intervention/>
- UCDP/PRIO Armed Conflict Dataset
  - <https://www.prio.org/Data/Armed-Conflict/UCDP-PRIO/>
- Correlates of War Project
  - <http://www.correlatesofwar.org/>
- Third-Party Peacekeeping Missions Dataset, 1946-2014:
  - <http://uca.edu/politicalscience/dadm-project/dadm-data-sets/>
- International Crisis Behavior Project
  - <https://sites.duke.edu/icbdata/data-collections/>

## February 24th: Automated Events Data

- *Skype Call from Philip A. Schrodt, Senior Research Scientist of Parus Analytics LLC*
- **Goals: Understand the potential and the problems with automated events data, how to extract necessary information from events datasets into Stata and R**
- King, Gary, and Will Lowe. "An automated information extraction tool for international conflict data with performance as good as human coders: A rare events evaluation design." *International Organization* 57.3 (2003): 617-642.
- Schrodt, Philip A., and David Van Brackle. "Automated coding of political event data." *Handbook of computational approaches to counterterrorism*. Springer New York, 2013. 23-49.
- Schrodt, Philip A. "Automated production of high-volume, real-time political event data." (2010). [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1643761](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1643761)
- Bell, Sam, David R. Cingranelli, Amanda Murdie, and Alper Caglayan. 2013. "Coercion, Capacity, and Coordination: Predictors of Political Violence." *Conflict Management and Peace Science*. 30(3): 240-262.

### Related Datasets:

- GDELT:
  - <https://www.gdeltproject.org/>
- ICEWS:
  - <https://dataverse.harvard.edu/dataverse.xhtml?alias=icews>
- SCAD:
  - <https://www.strausscenter.org/scad.html>

## March 2nd: Twitter Data with R and Stata

- **Goals: Basic introduction to how to extract Twitter or Facebook data into R and Stata, analysis of Twitter data, discussion of potential and problems with this data for policy professionals**
- Zeitzoff, Thomas. 2011. "Using Social Media to Measure Conflict Dynamics: An Application to the 2008–2009 Gaza Conflict." *Journal of Conflict Resolution* 55(6): 938–69.
- Zeitzoff, Thomas. 2017. "How Social Media Is Changing Conflict." *Journal of Conflict Resolution* 61(9): 1970–91.
- Pablo Barberá, Thomas Zeitzoff. 2018. "The New Public Address System: Why Do World Leaders Adopt Social Media?" *International Studies Quarterly*, 62(1): 121–130.

### Related Datasets:

- Ferguson Tweet Dataset
  - <https://archive.org/details/ferguson-tweet-ids>
- #JeffSessions Tweet Dataset
  - <https://dataverse.scholarsportal.info/dataset.xhtml?persistentId=doi:10.5683/SP/MQ3Y99>
- Tweets to Donald Trump (@realDonaldTrump)
  - <https://dataverse.scholarsportal.info/dataset.xhtml?persistentId=doi:10.5683/SP/8BAVQM>
- The fall of Aleppo tweets; Aleppo 2016-12-13 through 2016-12-29
  - <https://dataverse.scholarsportal.info/dataset.xhtml?persistentId=doi:10.5683/SP/DJLHSB>

### March 9th: No class - Spring Break

### March 16th: Maps with R and Stata

- *Skype Call from Jay Zwirblis, Co-Owner of Orbis Management*
- **Goals: Basic introduction on making maps with R and Stata, understanding grids and geocoded data**
- Cohen, Dara Kay, and Ragnhild Nordås. 2014. "Sexual violence in armed conflict: Introducing the SVAC dataset, 1989–2009." *Journal of Peace Research* 51(3): 418-428.
- Sundberg, Ralph, and Erik Melander. 2013. "Introducing the UCDP Georeferenced Event Dataset." *Journal of Peace Research*, 50(4): 523–532.

### Related Datasets:

- Geoquery:
  - <http://geoquery.org/>
- AidData's Geocoded Global Chinese Official Finance, Version 1.1.1
  - <https://www.aiddata.org/data/geocoded-chinese-global-official-finance-dataset>
- World Bank Geocoded Research Release, Version 1.4.2
  - <https://www.aiddata.org/data/world-bank-geocoded-research-release-level-1-v1-4-2>
- Political and Societal Violence By And Against Refugees (POSVAR) dataset
  - <https://doi.org/10.1177/0022343318811440>

## March 23rd Surveys & Experiments

- **Goals: Discuss the potential for surveys and experiments for policy professionals, outline the problems with human subject research, create basic survey and survey experiments**
- Please go through human subjects training courses: <https://research.uga.edu/compliance-training/human-subjects/>
- Establish a Qualtrics account: [https://eits.uga.edu/stories/free\\_qualtrics\\_survey\\_tool\\_available/](https://eits.uga.edu/stories/free_qualtrics_survey_tool_available/)
- Green, Donald P., and Alan S. Gerber. "The underprovision of experiments in political science." *The Annals of the American Academy of Political and Social Science* 589.1 (2003): 94-112.
- Druckman, James N., et al. "The growth and development of experimental research in political science." *American Political Science Review* 100.4 (2006): 627-635.
- Allred, Brent B., Michael G. Findley, Daniel L. Nielson, J.C. Sharman. 2017. "*Anonymous Shell Companies: A Global Audit Study and Field Experiment in 176 Countries.*" *Journal of International Business Studies* 48(5): 596-619.

### Related Datasets:

- World Values Survey:
  - <http://www.worldvaluessurvey.org/wvs.jsp>
- Latinobarómetro:
  - <http://www.latinobarometro.org/lat.jsp>
- Geocoded Afrobarometer Data, Version 1.0
  - <https://www.aiddata.org/data/geocoded-afrobarometer-data-v1>

## March 30th: Network Analysis Data

- *Guest Visit from Brian Starks, Export Control Analyst with Oak Ridge National Laboratory*
- **Goals: Discuss network data and its analysis, basic overview of how network data can be used in R, Stata, and UCINET**
- Hafner-Burton, Emilie M., Miles Kahler, and Alexander H. Montgomery. "Network analysis for international relations." *International Organization* 63.3 (2009): 559-592.
- Murdie, Amanda, and David R. Davis. "Looking in the mirror: Comparing INGO networks across issue areas." *The Review of International Organizations* 7.2 (2012): 177-202.
- Asal, Victor, and R. Karl Rethemeyer. "Researching terrorist networks." *Journal of Security Education* 1.4 (2006): 65-74.

## Related Datasets:

- Stanford Large Network Dataset Collection
  - <https://snap.stanford.edu/data/>
- Brandon Kinne's Replication Datasets
  - <https://dataverse.harvard.edu/dataverse.xhtml?alias=bkinne>
- Zeev Maoz's Replication Datasets
  - <http://maoz.ucdavis.edu/datasets.html>

## April 6th: Small N Data - Focus Groups and Interviews

- *Skype Call from Austin Emery, Intelligence Analyst*
- **Goals: Discuss small N data issues, focus on case selection, discuss how to protect human subjects**
- Look over this website: <http://atlasti.com/>
- And this one: <https://provalisresearch.com/qualitative-research-software/>
- And this one: <https://dialogueondart.org/>
- Carpenter, Charli, et al. "Explaining the advocacy agenda: Insights from the human security network." *International Organization* 68.2 (2014): 449-470.
- Aberbach, Joel D., and Bert A. Rockman. "Conducting and coding elite interviews." *PS: Political Science & Politics* 35.4 (2002): 673-676.

## April 13th: Small N Data - Fieldwork and Archives

- *We'll be meeting with Jill Severn, at the Special Collection Library, Room 325*
- **Goals: Discuss the role of fieldwork and archival research, ethical challenges of field research during conflict zones, course wrap up**
- Parkinson, Sarah Elizabeth. 2013. "Organizing Rebellion: Rethinking High-Risk Mobilization and Social Networks in War." *American Political Science Review* 107(3): 418-432.
- Wood, Elisabeth Jean. "The ethical challenges of field research in conflict zones." *Qualitative Sociology* 29.3 (2006): 373-386.
- Braun, Robert. "Religious Minorities and Resistance to Genocide: The Collective Rescue of Jews in the Netherlands during the Holocaust." *American Political Science Review* 110.1 (2016): 127-147.
- Lee, Alexander. 2015. "How (and How Not) to Use Archival Sources in Political Science." <http://www.rochester.edu/colcontent/uploads/2014/07/archives.pdf>

## April 20th, 27th, and 28th: Presentations of Final Policy Memos, Class Wrap-Up