GVPT 424
Quantitative Study of International Relations
Fall 2018

Contact Information
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Introduction
This is a class about *how* to do political analysis using the programming language R with a substantive focus in international relations. This is a heads up that this class will likely be very different from GVPT courses you've taken before.

This is my first time teaching this class. I say this for a few reasons.

First, I am SUPER excited to share this material with you. I've spent the last year or so becoming familiar with what R can do. While I still have a lot to learn, what I have learned is pretty cool. Moreover, I think learning R is *enormously valuable* for students. Based on my experiences with recent graduates, being able to work with data intelligently, a firm understanding of statistics, and some knowledge of programming are all very good things to have on one's c.v. Employers value these skills in their own right, but also because they know that people who have these skills can pick up other useful skills quickly.

TL; DR: Being able to say you know R will REALLY HELP YOU STAND OUT to potential future employers.

Second, there may need to be some adjusting of the syllabus on the fly. **I will never make a deadline sooner than stated below.** Even though I've done a lot of planning, some lessons may just not work for a variety of reasons, so we may need to adjust. I may also have to add some readings. I also want to get a lot of input from you guys (see below), which may also inspire revisions along the way. Put differently, please be patient with me if there are some bumps. We are on this journey together, my friends!

What Can You Expect to Get Out of this Class?
This class, in addition to being super fun, hits on *all* of the University's Undergraduate Learning Outcomes[1]. By the end of this course, you will:

- Have a working knowledge of the computer language R.
- Be able to scrape data from webpages and social media
- Have experience building and configuring original datasets.
- Be able to perform multivariate statistical analyses.
- Be able to create useful and compelling visualizations of data and your findings.
- Have experience presenting technical findings in a way that can be understood by a broad audience.

How is this Class Different from GVPT 421?
The first few weeks of this class are very similar to 421. After that, 421 spends more time on things like data visualization, text analysis, and twitter. By contrast, 424 will focus much more on regression and data analysis.

How this Class Will Work
This is a seminar with an active learning component. I will "lecture" very little. Students are expected to do the readings before class so that they can be active participants. Many classes will also have an active learning component during which students can work together on upcoming projects and problem sets. The purpose of this time is to give students a chance to learn from one another and to create an environment where students can work while the professor is present to answer questions. It is my sincere hope that we will *all* learn from each other during these active learning sessions.

The Books:
Three of the four books are available for free. All are required. You can buy hard copies of the last two if you'd like (I actually prefer hard copies.)

Using R for Data Analysis in Social Sciences by Quan Li
Amazon link: **https://tinyurl.com/y8s9vsmd**

Easy R by Gohmert, Li, and Wise (abbreviated glw below) (I will provide this book for you. It's not published yet, **so please do not distribute it to others**)

R for Data Science by Garrett Grolemund and Hadley Wickham (abbreviated below as gw)
Note: this is book is available for FREE online. You can buy a hard copy if you want on Amazon, but I'd just go for this, because free.
http://r4ds.had.co.nz/index.html

Text Mining for R: A Tidy Approach by Julia Silge and David Robinson (abbreviated as sr)
This one is also free.

https://www.tidytextmining.com/

[1] See here: https://www.irpa.umd.edu/Assessment/LOA-ug.html. It also speaks to several of the learning outcomes established by GVPT. See here: https://www.irpa.umd.edu/Assessment/Goals/GoalsBsos.html

You can also get it on Amazon:
https://tinyurl.com/yatvkhq6

Course Perquisites
This course has a prerequisite of GVPT 100/201. It is not restricted to GVPT majors, although they may be given priority registration.

Software:
We will be using R and R-Studio in this class.

The R software is FREE and works with any computer. It (as well as R-Studio) is also available on all of the computers in the LeFrak computer labs. Most people prefer to bring their own laptop with R and R-Studio installed to class.

https://cran.r-project.org/mirrors.html

There are instructions on how to download R and the associated data files/packages in the books and online (just check the table of contents of the dvm or gw books). Basically, pick a mirror site from the page above that is close to you. Then download it. You can get the free version (R-Studio Desktop). It's the first option on this page.

https://www.rstudio.com/products/rstudio/download/

A Note on R
I realize that some of you may have never used R before, while some of you may have used it in GVPT 100/201. Both are fine. I assume **no** knowledge of R on day one of the class. I also recognize that learning R for the first time can be a frustrating experience. I GET IT. I also get that this may not be your cup of tea, and that's fine. If you are really resistant to a whole class dedicated to programming, DO NOT TAKE THIS CLASS. I won't take it personally if you drop! I don't want people to be miserable!

Expectations
Here's what I expect of you.

- For you to be an **engaged** member of the class. This is a small class. I can tell who is actively participating and who isn't. This is not a class where you can just show up and coast. I hope you will see this as a good thing. Small classes, in my experience, tend to be fun for students and professors alike.
- For you to **try** even when things get frustrating. I know there are going to be times when you want to throw your laptop out the window because you can't figure out what's wrong with your code. I HAVE BEEN THERE. Just hang in there, TRY AGAIN, and **ask for help** from your classmates and me. Also, understand that a lot of the time the answer is, "Google it". This isn't because I don't want to tell you the answer, but rather that I'm also in the process of learning as well. I'll be Googling right along with you!
- For you to play a role in **contributing** to the class. R and data visualization are constantly evolving. Examples in politics are omnipresent; one person can't keep up.

Given this, there are some assignments where you guys have to find examples of R in action or when a particular type of data visualization is used. I'm hoping this will help demonstrate the value of R to you, and that it will also improve the class for everyone. Searching the web to find answers or examples of R is a big part of learning how to use it. I want to give you guys practice in doing this.

- For you to be an **active learner**. This involves two things. 1. Showing up to class and actually working on the assignments. 2. Working through the code *as you read about it in the books*. I can't stress how critical this is. Learning R isn't something you can do without DOING it as you are learning it. To this end, there are several assignments where you have to demonstrate to me that you coded while you were reading the books. This isn't me trying to be mean. You should be doing this for ***every*** reading, even if I don't have an assignment for it. It's what I do every time I read about how to program in R. It helps SO MUCH and allows you pick up R much faster.

The Midterm Election Project

The core project for this class will be an analysis of exit poll data that WE COLLECT! We are going to be going out into Montgomery County on Election Day to collect data from voters! Those data will then serve as the primary source of data for your final projects. The best part? You, the students, get to come up with some of the questions! You will also gain essential data management experience!

The legal details:

There are no additional fees, apart from transportation costs. Students are permitted to travel by personal vehicle; the students who do so must be made aware in a written document such as the trip itinerary (this syllabus), that the official field trip for them does not begin until they arrive at the site(s), and it ends when they leave the site(s). Additionally, the vehicle owner's personal auto insurance serves as the "primary" policy for third-party liability limits. The University's policy may cover the accident in excess of the students'/or their parents' personal policy, but only for liability, not damage/collision to their vehicle. The student is also responsible for any deductible amounts under their personal policy. There are no known risks associated with this field trip.

It is **mandatory**; only students with a valid excuse will be exempt. Students who miss the actual polling day will lose the points assigned to this project.[2] All participants are individually responsible for their personal conduct while on the field trip. The University has no obligation to protect them from the legal consequences of violations of law for which they may be responsible. No alcoholic beverages or controlled substances shall be transported or consumed in any vehicle (private, rented, or leased) at ANY TIME or used or consumed during the course of the field trip. Further, no narcotics, illegal drugs, or other controlled substances may be in the possession of, or used by, any person engaged in the field trip.

[2] I am open to alternative ways to make up the points, but the student must discuss this option with me beforehand and it will ONLY be an option if the student has a valid reason for missing the exit poll itself. In 2016 the make up option was entering data by hand, but that isn't happening this year because we are using kindles.

Timeline

- By Sept 18, provide questions for prototype survey to be fielded using Qualtrics (I'll be talking about Qualtrics in class in the days leading up to this).
- By October 11, the classes (421 and 424) will vote for our desired questions. I will create finalized version.
- By October 25, students will sign up for specific polling location and time.
- November 6: students will work a shift polling voters as they leave their polling site. Students will work in teams of 3 (or more). Each student will work a shift of 3 hours. You are welcome to do more if you want to!
- The data will be available essentially immediately.

Note that by staying enrolled in this class you are implying your consent to participate in this activity and acknowledging the mandatory nature of the project.

Students should expect to be engaged in the exit poll for most of the day. It likely won't take nearly that long, but I don't want people scheduling things that could interfere. You don't have to miss class for it (though, our class will not meet), but I am happy to provide you with a note for other faculty. I will provide you with a kindle that you will use to collect the data. You are responsible for returning this kindle during the time it is in your possession, and you must return it to me after the exit polling activity is complete. Students will also be required to obtain IRB certification before the election (I'll explain what this is in class).

Other Stuff

Grade Challenges

Any challenges to a grade must be submitted *in writing no* ***sooner*** than one week after the assignments have been handed back.

Class Attendance and Participation

This is a seminar style class (i.e., there isn't really a lecture). Students are expected to have completed all of the assigned readings and homework for each class and be prepared to discuss them. I take attendance. Participation grades will be based on a demonstrated ability to discuss topics covered in the readings and assignments.

Please be on time for class and stay until the end, unless you have made special arrangements with me. Entering late and leaving early is distracting to the instructor and to other students. If you must enter late or leave early, please take the seat nearest an exit and enter or leave as quietly as possible. Two or more disruptions of class that require me to address you directly in any form will lead to a reduction in your participation grade.

Canvas (ELMS):

Important communication regarding the class is conducted via Canvas. This includes posting of the syllabus, announcements, and grades. Students are required to be proficient users of Canvas and to ensure that their emails registered with Canvas are up to date and checked regularly.

DO NOT USE CANVAS TO EMAIL ME. I won't respond after the first week of class. Use my email provided above. I am for real about this. In fact, I'm gonna go with some crazy big font right now to make my point.

DO NOT EMAIL ME THROUGH CANVAS. Use regular email like you do for contacting literally every other person you know. It's scroco@umd.edu

Religious Observance
In accordance with the University's policy on the observance of religious holidays, it is the student's responsibility to inform me of any absences due to these holidays well in advance and **in writing** within the first two weeks of the semester. I am serious about the "in writing" part.

Absence Due to Illness
As per University policy students may submit a self-signed note for a medically necessitated absence from a single section during the semester. Such documentation is sufficient unless it coincides with a Major Scheduled Grading Event (e.g., class presentations). Any student missing more than one section or a Major Scheduled Grading Event is required to provide documentation from the Health Center or from an outside health care provider that verifies the dates of treatment and time frame during which the student was unable to meet academic responsibilities.

Code of Conduct
It is assumed that all students are familiar with and adhere to the code of academic integrity. See http://www.studenthonorcouncil.umd.edu/index.html

For more on campus policy guidelines, please see:
https://www.ugst.umd.edu/courserelatedpolicies.html

Extra Credit and Class Conduct
Graded assignments in the class provide students with ample opportunity to demonstrate mastery of the materials. Therefore, **no extra credit assignments** will be assigned in the class. Do not ask if you can make up your own assignment for extra credit. *The answer is no.*

A discussion of current political events will likely take place. These discussions can often stimulate strong feelings and heated debate. Students are expected to be respectful of the opinions of others, regardless of whether they share similar opinions or beliefs. Debates will be cut short that do not enhance understanding of course concepts. I expect students to offer substantive comments and questions when appropriate. I also expect students to not dominate a conversation, but to allow a free discussion and exchange of ideas.

Grades
Given the more fluid nature of this class, I'm not able to specify all the assignments in advance as I typically would. NONE OF THE ADDED ASSIGNMENTS WILL BE SIGNIFICANT. They will likely be along the lines of "find an example of this" or "write a two-paragraph reaction to this article". Note that there are no exams. Here's a rough breakdown of how the final grade will shakeout:

In Class Projects/Homework 50%
Parade (IRB, Attending the Parade, Post-Parade Reflection) 20%
Final Project: 15%
Final Presentation: 5%
Attendance: 5%
Participation: 5%

The following grading scale will be used:
A+: 98% and up
A: 94-97%
A-: 90-93%
B+: 88%-89%
B: 84-87%
B-: 80-83%
C+: 78%-79%
C: 74-77%
C-: 70-73%
D+: 68%-69%
D: 64-67%
D-: 60-63%
F: 59% and below

Assignments and readings can be found on the next page. All assignments are due (uploaded to ELMS) by the last day of class unless otherwise noted. NOTE: DO NOT LEAVE ALL THE ASSIGNMENTS UNTIL THE LAST MIN. This will come back to haunt you.

Partial Credit and "Trying"
You get partial credit for trying. If you are stuck on something, don't give up. Write up what you did to try to fix it and show me what you tried. "Trying" means more that sitting and staring at the computer for an hour before giving up. Write down the things you tried, explain your thought process behind why you tried certain things, show me where you failed and try to think of reasons why it didn't work. Upshot: I can only give credit if there is a

demonstration of effort on your part. You can't get full credit without getting the correct (final) answer, but I am more willing to grant partial credit to students who *document* how they tried to solve the problem.

Date	Day	Topic	Exit Poll	Readings	Homework
8/28/18	t	Intro			News article
8/30/18	th	Getting started with R		GLW 1 and 2,GW1	Have R and R studio working. GLW chapter 2 exercises Including the bar plot
9/4/18	t	Getting started with R		GLW 3	Practice 3.1.3, 3.3.3
9/6/18	th	Getting started with R		GLW 3	Practice 3.4.3, 3.5.3, 3.6.3
9/11/18	t	Getting started with R		GLW 4	Assignment given in class
9/13/18	th	Getting started with R		GLW 4	Assignment given in class
9/18/18	t	R analysis intro	Questions Done	Li 1/TBD	Assignment given in class/have questions for poll in
9/20/18	th	Scraping	Have IRB certification	None	Assignment given in class/Have IRB done
9/25/18	t	Scraping		Li 2/TBD	Assignment given in class
9/27/18	th	correlation		Li 4/TBD	Assignment given in class
10/2/18	t	Practice	Practice polling	None	None
10/4/18	th	OLS regression		Li 5/ TBD	Assignment given in class
10/9/18	t	OLS regression		Li 5/ TBD	Assignment given in class
10/11/18	th	OLS regression	Pick Questions	Li 5/ TBD	Assignment given in class
10/16/18	t	Replication		Li 7/ TBD	Assignment given in class
10/18/18	th	Replication		Li 7/ TBD	Assignment given in class
10/23/18	t	Practice	Practice polling	none	None
10/25/18	th	Replication		Li 7/ TBD	Assignment given in class
10/30/18	t	Practice		None	None
11/1/18	th	Replication		Li 7/ TBD	Assignment given in class
11/6/18	t	EXIT POLL	EXIT POLL	None	Charge your kindle
11/8/18	th	Exit poll data		None	Assignment given in class
11/13/18	t	Graphics		TBD	Assignment given in class
11/15/18	th	Graphics		TBD	Assignment given in class

11/20/18	t	project brainstorm		None	None
11/22/18	th	THANKSGIVING		None	work on project
11/27/18	t	work on project		None	work on project
11/29/18	th	work on project		None	work on project
12/4/18	t	NO CLASS		None	work on project
12/6/18	th	presentations		None	Presentations due