

INAF 3200: Quantitative Methods for International Affairs
Summer 2024

Professor Information

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Office Hours: Information on Canvas

Class will meet on Mondays - Thursdays from 10:50 am to 12:55 pm

Please note all the materials for this class (including the course packet, the online modules, and the materials on Canvas) were designed by Professor Patel specially for this class. Students are not allowed to take any of these materials and post externally (on any website including Course Hero or ChatGPT) or share without permission from Professor Patel.

The goal of this course is to train students to perform and analyze quantitative research in International Relations and Comparative Politics. By the end of this course, students should be able to read and understand the quantitative research found in reports and articles. Students should also be able to formulate hypotheses, design a research project, and use the correct statistical method(s) to test their hypotheses. All students will work with real data using a statistical package (Stata) and learn to manage, graph, display, and analyze different types of data.

This course is divided into three parts: 1.) definition of key terms, 2.) descriptive statistics, and 3.) inferential statistics. Unlike other classes, this class will focus on quantitative methodology, which means that over 95% of this course involves math and correctly interpreting numbers. At the end of the semester, students should be able to:

1. Articulate an appreciation for the diverse application of statistics and its relevance to the field of political science and international politics.
2. Demonstrate conceptual understanding of fundamental statistical ideas such as variability, distribution, association, causation, confidence, and significance.

3. Show introductory level practical ability to choose, generate, and properly interpret appropriate descriptive and inferential methods.
4. Exhibit critical thinking about statistics (e.g., demonstrate the ability to assess the ‘validity’ of statistical arguments in the popular press and scholarly publications).
5. Demonstrate the ability to effectively communicate statistical ideas (and thus be able to knowledgeably participate in social debates).
6. Demonstrate introductory level experience by using Stata, a statistical software widely used in the social sciences, to perform data analysis.

Academic Integrity

Students should familiarize themselves with the following University policies:

- Georgetown’s honor system <http://bulletin.georgetown.edu/regulations6.html>
- Students may not post externally or share any materials in course packet or on Canvas without permission from Professor Patel. More information about intellectual property and copyright can be found here: <https://www.library.georgetown.edu/copyright>
- Plagiarism policy <http://gervaseprograms.georgetown.edu/honor/system/53519.html>

Recommended Text

There is not a required text for this course, however, the following text is **recommended** for those students who would like extra problems or more detail on the materials covered in lecture.

- Agresti, Alan and Barbara Finlay 2008. *Statistical Methods for the Social Sciences, 4th Edition* Pearson

In addition to this recommended text, I have also included recommended policy readings that cover each of the topics we cover in class. These readings can be found under the Readings page within Canvas.

Required Materials:

The following materials are required for this course. Students are expected to bring the following to every class:

- Scientific Calculator. Students **MUST** bring their calculators to every lecture and to exams. The use of a calculator on your phone and/or tablet is unacceptable.
- A Course Packet, I will provide resources for the students. I prefer that students write out their notes since it is proven that students learn better when they actually take notes.

Stata

In this course, we will be using a statistical software called Stata. Stata is now available to ALL students. Students must use **Stata 18 BE**.

1. Students can download the software online by visiting the following website:
<https://georgetown.onthehub.com>.
2. Please sign in using your netid and password
3. Click on Stats and STEM and look for Stata 18
4. Follow the directions to download Stata 18 (If you have a Mac, click on Windows and choose Mac from the pull down menu)
5. Once you download it you will be asked to choose a version of Stata 18, **choose Stata 18 BE**
6. Once download is complete, open up Stata. You will be asked for registration code, authorization code, etc. You can find this information if you go back to the georgetown.onthehub.com website, sign in, and click on my orders. From here if you click details under the Stata 18 order, you will see all the information you need.
7. Note: Stata licensing with the university expires in February. Around this time, you can get updated registration information by following the previous step. You will get an email with instructions before the licensing expires.

Grades

The final course grade will be evaluated on attendance and HW assignments. The grade breakup is as follows:

- Attendance–10%
- HW 1–20%
- HW 2–20%
- HW 3–20%
- HW 4–30%

Final grades will be distributed as follows:

- 95 and above – A
- 90-94 – A-
- 87-89 – B+
- 83-86 – B
- 80-82 – B-
- 77-79 – C+
- 73-76 – C
- 70-72 – C-
- 60-69 – D
- below 60 – F

Note: I do not round the numerical final grade. A grade of 94.99 will be an A-, while a grade of 95 will be an A.

Attendance

I will take attendance every class. If you do not attend class in person, you cannot get credit for attendance. This is worth 10% of the total grade. Students will get the full 10% as long as they miss **no more than** 5 classes. After this, we will subtract one point for every additional class missed. For instance, if you miss 6 classes, the highest score you can receive is 9 points. If you miss 7 classes, the highest score you can receive is 8 points, and so on. **I do not record or keep track of excuses for missing class.**

Homeworks:

There will be 4 Homework Assignments. I will make HW assignments available after class on Thursday. The assignments will be due before class the following Friday. The last HW assignment will be due the last day of class. I am flexible on this, and we can discuss the first day of class as to what works best for students. I will take 5 points off for each day the HW assignment is submitted late. If you need an extension, you must communicate with me prior to the deadline. Out of fairness to all students, I will not make exceptions from this policy unless you have documentation from your academic dean.

Class Schedule

Instead of laying out the topics that we will cover in each class, I'm going to just list the different topics we will cover throughout the semester and the order in which we will cover them.

1. Introduction and Definition of Key Terms
2. Descriptive Statistics
3. Probability and Normal Curve
4. Recoding Variables
5. Confidence Interval
6. Chi Square
7. T Test and Proportions Test
8. ANOVA
9. Correlation and Bivariate Regression
10. Multivariate Regression
11. Multivariate Regression with Dummy IVs
12. Multivariate Regression with interactions

Homework Due Dates–Tentative

Homework 1: Due June 14
Homework 2: Due June 21
Homework 3: Due June 28
Homework 4: Due July 5

Canvas

Everything you need for this class will be on the Canvas Course site. This section will go over the different course content on Canvas.

- Home and Syllabus–Both these sections include the syllabus and important information about the course.
- Assignments–You will find under this section, the HW assignments. I will update this as we move through the semester.
- Panopto–This section will include the recorded lectures. I will try (if technology cooperates and there are no issues) to record all lectures and post them on panopto. If you don't see the lecture posted after the evening of the lecture, send me an email.
- Pages–This section includes all the documents you will need including handouts for each lecture, statistical tables, etc.
- Modules–This section includes the link to access the online modules.

- Announcements—I will use this section to post any important announcements. Please make sure that you change the settings so that you get an email once a new announcement is posted or that you check this section frequently.