Syllabus

L32 363. Quantitative Political Methodology
Monday and Wednesday 10:00 - 11:00 AM
McDonnell Hall 162
Labs Thursday and Friday (Misc.)
Social Science Computing Facility Classroom (Eliot Hall First Floor)

Instructor Information

Andrew D. Martin, Ph.D.
Associate Professor of Political Science
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Telephone Number: 314.935.5863
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Office Hours: By appointment only (email to schedule)

Textbook

Alan Agresti and Barbara Finlay. 1997. *Statistical Methods for the Social Sciences, Third Edition.* Upper Saddle River, NJ: Prentice Hall. ISBN: 0-13-526526-6.

Course Description

What is the probability that two states will go to war in a particular year? How likely is it that Justice O'Connor will vote to grant cert in an abortion rights case? How strong is the relationship between issue preferences and voter behavior? Do domestic political institutions systematically impact currency markets? The use of quantitative methods allows political scientists to answer these types of questions.

This course is an introduction to research methodology and quantitative analysis for social scientists. Students will be introduced to the logic of social scientific inquiry, and to the basic statistical tools used to study politics. Students will learn and apply the following to answer substantive questions: measurement, descriptive analysis, correlation, graphical analysis, hypothesis testing, confidence intervals, analysis of variance, and regression analysis. Major components of the course include learning how to collect, manage, and analyze data using computer software, and how to effectively communicate to others results from statistical analyses. Students will work collaboratively on research projects where they will collect and analyze data from a prescribed protocol, and present their findings in a research paper.

Requirements and Evaluation

The requirements for this course are simple---do the readings ahead of time, attend class and labs, and complete the assignments on time. The twice-a-week lectures will focus primarily on substantive issues as well as the statistical issues covered in the readings. The lab sessions will serve as a software tutorial, as well as a seminar-like setting where students can discuss research design. Lab instructors will also introduce new statistical material covered in the text but not in the lecture. Expect to leave the lab session each week with the ability to implement the analyses we covered in the lecture, and a good understanding of why you would want to do them.

Student evaluation will be based on homework assignments, a final project, and examinations. Students will be given weekly homework assignments (these will be made available on Wednesdays, and will be discussed in the lab sessions). Unless there is prior announcement, these assignments will be due in class on Monday, and will be returned later that week in Eliot 200 along with an answer key. Homeworks will comprise 20% of the final grade.

Students will also complete a final group project. This project will consist of a research paper where students will answer a question (or set of questions) dictated by a research design to be provided. Students will collect relevant data, perform analyses, and write-up their findings. Two to three people---typically within the same lab section---will comprise a group. More details (including those about grading) will be forthcoming about halfway through the semester. The project grade will count for 20% of the final grade.

There will be two mid-term exams (as noted on the schedule). These will be graded as quickly as possible, and will be returned in Eliot 200. Each midterm will make up 20% of the final course grade. There will also be a final exam as scheduled by the undergraduate college that will count for 20% of the final course grade.

Grade will be assigned as follows.90%-100% A, 80%-90% B, 70%-80% C, 60%-70% D, 0% - 60% F. Plusses or minuses will be given for scores within two points of a cutoff, and by discretion of Professor Martin.

Late assignments will not be accepted, and no incompletes will be assigned, but for extreme circumstances. Failure to meet the requirements of the course will result in a failing grade. If a student needs to miss an examination, *prior arrangements* should be made with Professor Martin.

Teaching Assistants

There are two graduate teaching assistants and four undergraduate teaching assistants assigned to this course. All of the teaching assistants concentrate in political science, and have vast experience in applied quantitative analysis. They will each hold office hours.

Mr. Michael Lynch (Graduate TA)
mslynch@wustl.edu
Sections: TBA
Office Hours: TBA

Mr. Matthew Schneider (Graduate TA)
mmschnei@wustl.edu
Sections: TBA
Office Hours: TBA

Ms. Blythe Chorn
blythechorn@wustl.edu
Sections: TBA
Office Hours: TBA

Ms. Kelly Donahue
kellydonahue@wustl.edu
Sections: TBA
Office Hours: TBA

Mr. Michael Pinkston
mrpinkst@wustl.edu
Sections: TBA
Office Hours: TBA

Ms. Bryce Rattner
bhrattne@wustl.edu
Sections: TBA
Office Hours: TBA

Each laboratory session will be led by one of these teaching assistants. Most grading will be done by the graduate TAs; some will be done by Professor Martin. You should meet with the graduate TAs with any concerns about evaluation. I am happy to meet with students *after* they have met with the graduate TAs. The teaching assistants will

work closely in conjunction with Professor Martin on all issues of grading and student evaluation. I encourage you to get to know the teaching assistant in your lab.

Course Evaluation

Course evaluation will take place online at http://evals.wustl.edu from November 20 through December 13. All students who complete the course evaluation will receive one percentage point of extra credit toward the final course grade. These evaluations are an extremely important tool we use to make this course better.

Software

In the lab sessions you will be using the Stata statistical package (http://www.stata.com). This package is widely used in political science, economics, psychology, sociology, and biostatistics. Stata is available for your use in the Arts & Sciences Computing Lab in Eads Hall, and in the Social Science Computing Facility (SSCF) in Eliot Hall. The consultants in SSCF are experienced in Stata, and can help if you have software difficulties. You can also purchase Stata at a student price from the Stata website. Please feel free to contact Professor Martin or your teaching assistant if you have any questions about software.

Calendar

Note: <Red Text> assignments ☐ Expand Topics ☐ Expand Assignments ☐ Include History

Date	Time	Description
09/01/04 Wed	10:00A-11:00A	Introduction and Organization
09/06/04 Mon	10:00A-11:00A	LABOR DAY [NO CLASS]
09/08/04 Wed	10:00A-11:00A	Measurement
		Sections 1.1-1.4, 2.1-2.2
09/13/04 Mon	10:00A-11:00A	Sampling
		Sections 2.3-2.5, 3.1
09/15/04 Wed	10:00A-11:00A	Location and Scale
		Sections 3.2-3.6
09/20/04 Mon	10:00A-11:00A	Probability Distributions
		Sections 4.1-4.2
09/22/04 Wed	10:00A-11:00A	Inference
		Sections 4.3-4.6
09/27/04 Mon	10:00A-11:00A	Estimation
		Sections 5.1-5.2
09/29/04 Wed	10:00A-11:00A	Proportions and Sample Size
		Sections 5.3-5.4, 5.6
10/04/04 Mon	10:00A-11:00A	Review and Catch-Up
10/06/04 Wed	10:00A-11:00A	Exam One
10/11/04 Mon	10:00A-11:00A	Hypothesis Testing
		Sections 6.1-6.2
10/13/04 Wed	10:00A-11:00A	Type I and Type II Errors
		Sections 6.3-6.4
10/18/04 Mon	10:00A-11:00A	Small Sample Inference
		Sections 6.5-6.6, 6.8
10/20/04 Wed	10:00A-11:00A	Comparing Means and Proportions
		Sections 7.1,7.3, Section 12.1
10/25/04 Mon	10:00A-11:00A	Small Sample Comparisons
		Sections 7.2, 7.4, 7.6

10/27/04 Wed	10:00A-11:00A	Tables and Categorical Variables
		Sections 8.1-8.3
11/01/04 Mon	10:00A-11:00A	Review and Catch-Up
11/03/04 Wed	10:00A-11:00A	Exam Two
11/08/04 Mon	10:00A-11:00A	Lines and Linear Relationships
		Sections 9.1-9.2
11/10/04 Wed	10:00A-11:00A	Simple Linear Regression
		Sections 9.3-9.4
11/15/04 Mon	10:00A-11:00A	Inference for Linear Regression
		Section 9.5
11/17/04 Wed	10:00A-11:00A	Assumptions and Model Fit
		Section 9.6
11/22/04 Mon	10:00A-11:00A	NO CLASS
11/24/04 Wed	10:00A-11:00A	Thanksgiving
11/29/04 Mon	10:00A-11:00A	Multivariate Analysis and Statistical Control
		Sections 10.1-10.5, 11.1
12/01/04 Wed	10:00A-11:00A	Multiple Regression
		Sections 11.2-11.4, 11.6
12/06/04 Mon	10:00A-11:00A	Logistic Regression
		Sections 15.1-15.3
12/08/04 Wed	10:00A-11:00A	Review and Wrap-Up
12/13/04 Mon	10:00A-11:00A	READING PERIOD BEGINS
12/15/04 Wed	10:00A-11:00A	READING PERIOD ENDS
12/17/04 Fri	10:30A-12:30P	Final Exam
12/20/04 Mon	10:00A-11:00A	GRADES POSTED