Stony Brook University

POL 501
INTRODUCTION TO STATISTICS FOR PUBLIC POLICY

Syllabus

Fall 2011
Class Location: Melville Library N4000
Class Time: Monday 6:00 PM – 9:00PM

Instructor:	Roland Kappe		
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Course Overview:
This is the first methodology course in the Political Science Department's M.A. in Public Policy program. You will be introduced to fundamental statistical concepts and tools, such as measuring political phenomena, research design, statistical inference, building and testing hypotheses, and the basics of regression analysis. These tools will form the foundation for the second statistics course in the program (POL 502).

Course Goals:
The main purpose of this course is to teach you the basic concepts and techniques for empirical research on public policy using statistical analysis. Statistical tools are extremely valuable for anyone working in public policy. Note that learning statistics is not necessarily a goal in and of itself, rather it will provide you with a powerful toolset that will guide your decision-making and lets you evaluate the consequences of political decisions since decision-making in public policy often revolves around quantifiable facts (e.g. project costs or measures of policy effectiveness). Being able to quantify facts and make statistical arguments will make you a better (and almost certainly more marketable) public policy analyst. Let me put it another way: someone with good statistical skills is unlikely to ever be unemployed and will probably earn more: http://www.nytimes.com/2009/08/06/technology/06stats.html

After this class you will be capable of conducting your own quantitative research, and you will be able to critically assess the research of others. You will also be prepared to take the second, more advanced statistics class in the MAPP program, POL 502.

During this course you will be using some math and you will learn how to use a statistical software package, SPSS. One word of warning: we will start easy, but the material is highly cumulative. Don't miss classes or fall behind in assigned readings or assignments. It will be difficult to catch up. My goal is to make this as pain free for you as possible and I understand that some people feel a little uncomfortable with math. However, as long as you are willing to put in the necessary work, this is not too difficult for anyone. All of you can do this!

Course Requirements:
Students are expected to attend all lectures and are responsible for the material if they miss class. Assigned readings have to be completed before the class they are posted for below.

There will be three exams: a shorter first exam (worth 10%), a cumulative midterm (25%) and a cumulative final (30%). In order to apply the skills you learned in class to your own topics of interest, there will be a student research project (details later) worth 25% of the grade. The remaining 10% of the grade are based on class participation and homework assignments:

Research Paper	25%
Participation & Homework	10%
First Exam	10%
Midterm Exam	25%
Final Exam	30%

All work will be graded on a 0-100 scale:

A	100-94	B+	89-87	C+	79-77	F*	69-0
A-	93-90	B	86-84	C	76-74		
		B-	83-80	C-	73-70		

* The Graduate School does not recognize a 'D'.

Make-up exams will only be offered under extraordinary circumstances, e.g. a medical emergency. Proper documentation is required. Note that simply visiting a doctor is not sufficient. There must be written documentation stating that the student was physically incapable of taking the exam. All make-up exams must be completed within one week (7 days) of the original exam date. Failure to schedule a make-up exam within the allotted time will result in a grade of zero for the exam.

Readings and Material:

- ***Garner, Roberta, "The Joy of Stats",*** *2nd ed., Toronto: University of Toronto Press, 2010.*
- ***Pollock, Philip H. "The Essentials of Political Analysis.*** *Fourth Edition. CQ Press, 2011.*

The first one is a quick and gentle, one can even say *joyous* introduction to statistics. You should usually read the assigned parts of the Garner book first. The Pollock book is slightly more detailed and provides a better coverage of theoretical and research design questions.
Part of the class will involve familiarizing yourself with the statistical software package SPSS. It is essential that you have access to the software. There is also a SPSS companion to the Pollock book, which is strongly recommended:

- ***Pollock, Philip H. "An SPSS Companion to Political Analysis".*** *Fourth Edition. CQ Press, 2011.*

I strongly encourage you to obtain your own copy of SPSS. The cheapest option is a bundle offered by CQ press that includes the text, the companion, and a student copy of SPSS for only $25 more than the price of the two text books (see cqpress.com for more info) If you want to buy SPSS separately, student copies are also available through Stony Brook's DoIT. Again, lack of access to SPSS or a facility with SPSS will not be accepted as an excuse for not completing or turning in assignments on time.

Computer Work:
In order to give you the practical skills needed for data analysis, this class introduces the statistical software package SPSS. The use of SPSS is not optional, as some assignments will require graphical and statistical analysis using this software. SPSS is installed on computers on most SINC sites, but it is strongly recommended you buy your own copy of SPSS (see `Readings' section). Lack of access to SPSS or a facility with SPSS will <u>not</u> be accepted as an excuse for not completing or turning in assignments on time.

Americans with Disabilities Act:
If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Disability Support Services, ECC (Educational Communications Center) Building, room128, (631) 632-6748. They will determine with you what accommodations, if any, are necessary and appropriate. All information and documentation is confidential.

Academic Integrity:
Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty are required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Technology & Management, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic judiciary website at http://www.stonybrook.edu/uaa/academicjudiciary/

Critical Incident Management:
Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Judicial Affairs any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures.

Course Schedule:
[Changes to this schedule may become necessary depending on our progress through the material.]

Date	***Topic***	***Required Reading:***
29-Aug	Introduction	Pollock, Ch1, Garner Ch1,
12-Sep	Frequency Distributions and Central Tendency	Pollock Ch2, Garner Ch2,
19-Sep	Quantifying Variability	Pollock Ch3
26-Sep	**FIRST EXAM**, followed by Fun and Games: Probability Theory	 Garner Ch3
3-Oct	Samples and Population	Pollock Ch5
10-Oct	Quantifying Uncertainty ***(DRAFT OF FIRST PART OF RESEARCH PAPER DUE)***	Pollock Ch6
17-Oct	Hypothesis Testing	
24-Oct	**MIDTERM EXAM**	
31-Oct	Relationships among Variables: Categorical Data	Pollock Ch7
7-Nov	Relationships among Variables: Continuous Data	Garner Ch4
14-Nov	Regression I	Pollock Ch8
21-Nov	Regression II	
28-Nov	Regression III	
5-Dec	Review Session ***(RESEARCH PAPER DUE)***	
12-Dec	**FINAL EXAM (6:00 – 9:00 PM)** *The final examination will be given in the room where the regular class is held. It is the student's responsibility to plan a class schedule that avoids exam conflicts and too many exams in the same day.*	