

POL 502
Intermediate Statistics for Public Policy
Spring 2005
Thursdays 6-9 pm

Prof. Matthew Lebo
Office: SBS S-749
Office hours: TBA
Phone: 632-7554
Email: mlebo@notes.cc.sunysb.edu (usually the best way to contact me)

I. Overview:

The purposes of this course are to provide students with useful tools for engaging in empirical research in public policy and to help students understand literature that uses quantitative research. Students will learn how to think about theoretical problems in terms of statistical models. Students will learn the basics of hypothesis testing, OLS regression models, and some extensions of the basic regression model. Students should have taken POL 501 and understand the basics of research design, data management, and bivariate statistics. The algebra skills needed for POL 501 will be sufficient for this class, but we will use them a lot more.

As with POL 501, we will make good use of the statistical program MINITAB. Minitab will be made available free (for a dollar) to any student who does not already have a copy. Again, it will be an essential component to the course.

I will try to make as extensive use of Blackboard as possible.

You can access class information on-line at: <http://blackboard.sunysb.edu> If you used Blackboard during the Fall semester, your login information (Username and Password) has not changed. If you have never used Stony Brook's Blackboard system, your initial password is your SOLAR ID# and your username is the same as your Stony Brook (sparky) username, which is generally your first initial and the first 7 letters of your last name. For help or more information see:

<http://www.sinc.sunysb.edu/helpdesk/docs/blackboard/bbstudent.php>

For problems logging in, go to the helpdesk in the Main Library SINC Site or the Union SINC Site, you can also call: 631-632-9602 or e-mail: helpme@ic.sunysb.edu

Assignments, lectures, data sets, and power point presentations will be available at the site. Also, check for messages regarding class news such as possible snow days or other last minute changes or cancellations. Please be sure that your email address is in the Blackboard system so that you can receive class mailings.

II. Computer Work

A lot of the work in this class will focus on graphical and statistical use of data using MINITAB – a relatively easy but powerful software package. Using MINITAB is not an optional part of the course and copies will be made available to the students for use off

campus. Students are encouraged to work together on homework and assignments that use MINTAB *but each assignment that is handed in must be unique.*

III. Required and Recommended Texts

There are two required textbooks for this course.

They are:

A.H. Studenmund: Using Econometrics: A Practical Guide, 4th Edition. 2001. Addison Wesley Longman.

Barbara Ryan and Brian Joiner: MINITAB Handbook, 4th Edition. 2001. Duxbury Press.

Additional readings from political science journals and online resources will be assigned through the course of the term.

IV. Course Requirements

Two assignments: 20% and 30% each. Due dates:

Assignment 1: March 10th – 20% of final grade.

Assignment 2: April 28th – 30% of final grade.

Students are encouraged to help each other with assignments but each assignment must be an individual effort. Students handing in assignments that are too similar to each other will receive grades of 0.

Mid-term examination: March 17th In Class – 25% of final grade.

Final exam: Take home exam due May 5th in class – 25% of final grade.

Assignments are to be handed in at the beginning of the class session for which they are due. Details about each assignment will be discussed in class.

V. Disability Policy

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, room 128, (631)632-6748. They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential. Students requiring emergency evacuation are encouraged to discuss their needs with their professors and Disability Support Services. For procedures and information, go to the following web site:

<http://www.ehs.sunysb.edu/fire/disabilities/asp>

VI. Class Schedule and Readings (note: additional readings may be added)

Reading assignments should be completed before the class for which they are assigned.

We will try to keep to this schedule as closely as possible.

WEEKLY TOPICS:

Week 1 January 27th

Topic: Introduction to Regression Analysis

Reading: Studenmund, Chapter 1

Week 2 February 3rd

Topic: Ordinary Least Squares

Reading: Studenmund, Chapter 2.

Week 3 February 10th

Topic: Using Regression

Reading: Studenmund, Chapter 3.

Week 4 February 17th

Topic: OLS & Regression Assumptions

Reading: Studenmund, Chapter 4.

Week 5 February 24th

Topic: Hypothesis Testing in Regression

Reading: Studenmund, Chapter 5

Week 6 March 3rd

Topic: Hypothesis Testing II

Reading: Studenmund, Chapter 5.

Week 7 March 10th

Assignment 1 Due

Topic: Choosing Independent Variables

Reading: Studenmund, Chapter 6.

Week 8 March 17th

MIDTERM EXAMINATION – IN CLASS

Week 9 March 31st

Topic: Model Choice and Multicollinearity

Reading: Studenmund, Chapter 8.

Week 10 April 7th

Topic: Dummy Variables and Interactions

Reading: Studenmund, Chapter 7.

Week 11 April 14th

Topic: Interactions II

Reading: Studenmund, Chapter 7.

Week 12 April 21st

Topic: Serial Correlation and Generalized Least Squares
Reading: Studenmund, Chapters 9.

Week 13 April 28th

Topic: GLS Continued
Reading: Studenmund, Chapter 9.
Assignment 2 Due

Week 14 May 5th

Topic: Dummy Dependent Variables
Reading: Studenmund, Chapter 13.
Final Exam is Due

VII. Extras

This class requires a lot of work by the student. Missing classes or falling behind in the readings and homework assignments will severely limit student success. **It is extremely difficult to cram for statistics**, so be sure to keep up.

Also, three hours of statistics at a time can be tedious! Having read the information before class will make class time much easier.

Written work must be submitted on time. Late work receives a penalty of one letter grade for every day it is late beginning the day it is due.