Empirical Analysis for P.A.

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POLS5684 - Spring 2017
This course is about quantitative analysis and its applications for public administration. We will learn a range of statistical techniques and apply these concepts to practical research and public administration problems throughout the semester. The first third of the semester will focus on the basics of hypothesis testing and statistical significance. The second third will introduce basic regression analysis and its applications to real-world problems. During the last part of the course, we will cover as many advanced topics and applications of regression analysis as time allows.

POL5000 is a prerequisite to this course. This means that we do not have any expectation of prior statistical training and I do not assume any prior knowledge of statistics. In fact, the only prior knowledge you need is how to add, subtract, multiply and divide. We will learn everything else throughout the course. That said, the course does move quickly, especially during the first third of the semester. Please do not hesitate to contact me if you feel yourself slipping behind or if you are confused by any of the material. We are all starting at different levels of expertise when it comes to quantitative methods and I am more than happy to spend extra time helping you. I suspect that everyone will struggle with some concept or material at some point during the semester. Don’t be afraid to talk with me about any question you may have.
We will be reading several important scholarly works published in both journal articles as well as books. There are three books you will need to purchase or otherwise obtain listed above.

In addition, you will need access to a statistical software package that can perform basic functions such as difference of means tests and regression analysis. If you are not familiar with a particular software package, I strongly recommend STATA Intercooled (IC) 13 perpetual license. I will be teaching the class using STATA and we will have three STATA-intensive courses throughout the semester. I will provide information about how to get STATA software at a student discount during the first week of class.
There will be additional readings provided to you throughout the semester to supplement the three required books. I also strongly recommend that you bring a basic calculator to every class session.

**Grades**

Instead of the traditional exams and term papers, we will work on three projects throughout the semester that will involve data analysis on real-world problems using STATA (or your preferred software). These projects comprise the bulk of your grade and are intended to bridge the gap between the abstract methodological theories and practical problems faced by analysts who conduct actual political research.

- **Project I:** Basic Statistical Concepts and Analysis: 25%
- **Project II:** Regression Analysis: 25%
- **Project III:** Advanced Regression Analysis: 25%

Guidelines for the projects will be provided throughout the semester. There will also be additional exercises on a regular basis to help you learn the specific skills and concepts necessary for successfully completing the three projects. Finally, while the class will mostly consist of lectures and guided workshops, a portion of your grade will also be determined by attendance and participation. Showing up every week is extremely important in a methods class, especially one that only meets once a week.

- **Exercises and Activities:** 15%
- **Attendance and Participation:** 10%

**Integrity**

One of the overarching goals of this course is to learn how to conduct empirical analysis in public administration (and political science). Such learning can only occur in a setting of trust and academic integrity where everyone does his or her own work.

This cannot be stated emphatically enough—an academic setting of trust and integrity has zero tolerance for any form of academic dishonesty. Any act of academic dishonesty will result in an “F” grade for the course. In addition, academic dishonesty can also result in the loss of scholarships and suspension or expulsion from the university. You should consult the University
Regulation 805 (www.uwyo.edu/legal/Uniregs/ur802.htm) and also the Political Science Department’s policy statement (www.uwyo.edu/Pols/Academic_dishonesty.doc) for more information about academic dishonesty.

By joining this class, you are making a commitment to one another to attend every class session, to complete the readings, and to contribute your efforts and insights during the class activities and discussions. This commitment means taking the readings and the material seriously. Failing to live up to this commitment makes it harder on your classmates during the discussions and activities during the Friday discussion sections and will make it more difficult for you to do well on the exams.

Having said that, life happens. Sometimes unexpected problems arise that may prevent you from making it to a one or two classes or that might require you to come a bit late. Please try to enter the room as quietly as possible.

Attendance is required and expected for all classes. If you miss class, you will need to get notes from one of your friends. If it is a university excused absence then bring documentation with you to the next class so that you are not marked off for those points. Make-up quizzes are only allowed for university excused absences.

Class participation is a vital part of of this course, and I will be grading on quality as well as quantity of contributions during the discussions. I prefer not to call on people during these discussions, but I do reserve the right to do so if it becomes necessary.

In setting high expectations for you, I am also making a commitment to each of you that I will make classes worth attending. You will quickly find that I like to have fun during the class discussions and activities, for example. But I am also making a commitment to eliminate busy work and to avoid wasting your time with meaningless, superficial course material. I have tried to include only the most relevant and important theories, concepts, and material in the discussions and activities.

All of the discussions and activities during class time are intended to help you successfully complete the four projects. In some instances, I may end class early or cancel a class if we have covered all of the relevant material ahead of time.
Do not be hesitant to ask for help if you are struggling with the material. Some of the readings are very abstract and dense. I expect everyone will have difficulty fully understanding the material at some point during the semester. So long as you put in an honest effort, there is nothing wrong with asking for help or getting some clarification on something that is not clear. I am here to help you learn and apply this material any way that I can. Feel free to drop by my office, email me, see me after class, or call whenever you feel that you do not fully understand something.

In addition, students who have a physical, learning, sensory, or psychological disability and require accommodations need simply contact me after class as soon as possible. All I need is confirmation from the University Disability Support Services (UDSS), and you may register with UDSS in the Student Educational Opportunity offices, Room 330 Knight Hall to provide them with documentation of your disability.
Course Schedule

**January 23-27**
Week 1: Introduction — Descriptive Statistics

Readings:
None

**January 30 - February 3**
Week 2: Probability Theory

Readings:
Caldwell Chapters 1-5
Meier et al Chapters 5-7

**February 6-10**
Week 3: Hypothesis Testing

Readings:
Caldwell Chapters 6-8
Optional: Meier et al. Chapters 10-13

**February 13-17**
Week 4: Socialization: Hypothesis Testing and Correlation

Readings:
Caldwell Chapter 9; Chapter 12
February 20-24
Week 5: Stata and Overview
Readings:
Pollock Chapters 1-4

February 27 - March 3
Week 6: Correlation and Regression
Readings:
Meier Chapters 17-18
Pollock Chapters 5-6; Chapter 8

March 6-10
Week 7: Regression Continued
Readings:
Meier Chapter 20

March 13-17
Week 8: Spring Break
Readings:
Inside of Your Eyelids

March 20-24
Week 9: Interaction Terms and Misc.
Readings:
Pollock Chapter 9
March 27-31
Week 10: More Multiple Regression
Readings:
Meier Chapter 21

April 3-7
Week 11: Stata and Overview
Readings:
TBA

April 10-14
Week 12: Logit/Probit
Readings:
Pollock Chapter 10

April 17-21
Week 13: Predicting and Forecasting
Readings:
Meier Chapter 19
Pollock Chapter 11

April 24-28
Week 14: Predicting/Forecasting II
Readings:
TBA
May 1-5
Week 15: Stata and Projects

Readings:
TBA

Final Projects Due - Friday, May 12th

The end