

RESEARCH DESIGN AND DATA ANALYSIS FOR PUBLIC POLICY

Four credits / 34:833:530:02 / index: 14724

SEMESTER: Fall 2008

DATE / TIME: Lectures: Wednesdays, 4th and 5th periods, 1:10 pm to 3:50 pm
Location: Room 112, Civic Square Building [CSB]

Labs: Mondays, 7th period, 6:00 pm to 7:10 pm
Location: Room 372 (Computer Lab), CSB

PROFESSOR: Marc D. Weiner mdweiner@rci.rutgers.edu Room 273, CSB

OFFICE HOURS: By appointment only

COURSE WEBSITE: <https://sakai.rutgers.edu/portal> at tab [34:833:530:02 F08](#)

Encamped upon the college plain
Raw veterans already train
As freshman forces;
Instructors with sarcastic tongue
Shepherd the battle-weary young
Through basic courses.

Thou shalt not do as the dean pleases,
Thou shalt not write thy doctor's thesis
On education,
Thou shalt not worship projects nor
Shalt thou or thine bow down before
Administration.

And when he occupies a college,
Truth is replaced by Useful Knowledge;
He pays particular
Attention to Commercial Thought,
Public Relations, Hygiene, Sport,
In his curricula.

Thou shalt not answer questionnaires
Or quizzes upon World-Affairs,
Nor with compliance
Take any test. Thou shalt not sit
With statisticians nor commit
A social science.

Excerpt, [Under Which Lyre: A Reactionary Tract for the Times](#) (Phi Beta Kappa Poem, Harvard, 1946)
W. H. Auden (for the full text, see: <http://members.wizards.net/~mlworden/atyp/auden.htm>)

COURSE OVERVIEW

According to the Bloustein School's 2006-08 catalogue, this course presents the "[s]cientific method of study, the processes of conceptualization and measurement, and experimental design, or how social programs are structured so they may be effectively studied." More usefully, this is "Methods I" (sometimes derisively known as "Baby Stats"); nomenclature aside, this course is designed to introduce you to – and help you become familiar and comfortable with – the basic research design methods and statistical principles used in policy analysis.

Had I written the course catalog description, I would not have used the disjunctive (“or”) but rather the conjunctive (“and”) in an effort to stress – from the very beginning of your formal graduate school research skills development – that research methods do not exist in a vacuum, i.e., we do not learn methods for methods’ sake. Rather, we recognize that research methods are deployed in real world contexts and it is vital for you to develop not only methodological acumen, but also a practical and realistic understanding of the phenomenon you want to study. This is particularly true for policy analysts and, as we move through this course, it will serve you well to think through how the techniques you are learning here can be applied to your substantive area of interest. That’s the goal – to teach you how to move forward, with methodological competence, in your substantive area of interest. Unless you intend to become a methodologist (or, worse, a methodology teacher), this is a “helper” course in the sense that it facilitates your performance in other courses.

The formal goal of our work together, then, is to provide you a comprehensive working introduction to the methodological principles and practices that will prepare you to do well in Methods II and – even more importantly – will facilitate the research required in graduate school and in your ultimate career. To those ends, this course has two components. The first, which will last four weeks, will not be statistical, but rather empirical. By starting with empiricism we start, essentially, with understanding how it is that we understand something. Here we ask in very basic terms (1) how is it that we know something?, and (2) how do we know when we know it “for sure” versus when, e.g., we know it with a 95% probability of accuracy? We start, then, epistemologically by asking how we define and conceptualize a research problem and how we measure the things that will inform us about that research problem. In this first section, we also complement the empirical approach to observation “in the wild” with empirical observation under controlled circumstances by exploring the experimental design approach. Finally, during this period you will learn to use statistical packages – most notably SPSS (but also, if time permits, Stata) – so that when we get to the next part of the course, you will be ready to use the computer to do the statistical heavy lifting that quantitative research requires.

In the second part of the course, which will last eight weeks, we will learn the basic statistics required for social science and policy research. This part of the course has three core modules. First, we will cover descriptive statistics, by which we will learn the proper techniques and language of measurement, which is the threshold of quantitative analysis. Second, we will take up the techniques and language of inferential statistics, by which we will learn when and how we can make sustainable claims about a larger population from a smaller sample. Finally, we address associative statistics, which enable us to observe and describe relationships between variables. Here, we will introduce substantive theory into the mix in order to give the associational relationships some interpretive context. This will help us move beyond the observation of correlation to the inference of causality. This, then, is the launching pad for the regression analysis you will study in Methods II.

At the end of the day, you will have the opportunity for problem solving in your area of substantive interest, for the building of data, the identification of data problems, statistical analysis applications, reaching conclusions from data analysis and – perhaps most importantly of all – communicating your results in writing in a way that contributes to the literature of your area of interest.

REQUIRED BOOK

Frankfort-Nachmias, Chava and David Nachmias (2007). Research Methods in the Social Science, 7th ed., New York: Worth Publishers. Available at the main Rutgers bookstore, in downtown New Brunswick.

REQUIRED ARTICLES

I may, from time to time, assign additional required readings. These will be found as PDFs under the resources tab on the course Sakai site.

ASSIGNMENTS AND GRADES

Numerical grades will be calculated on a simple percentage basis as follows:

Exam #1	35%
Assignment #1	10%
Assignment #2	10%
Assignment #3	10%
Exam #2	35%
Total	100%

Letter grades will be assigned as follows:

90 to 100%	=	A
85 to 89%	=	B+
80 to 84%	=	B
75 to 79%	=	C+
70 to 74%	=	C
0 to 69%	=	F

Schedule of Assignments:

Grading Event:	Date assigned:	Date due:	Covers:
Exam #1	Wednesday, October 1 st		Chapters 1 through 9
Assignment #1	Wednesday, October 8 th	Wednesday, October 22 nd	Chapters 13, 14, & 15
Assignment #2	Wednesday, November 5 th	Wednesday, November 19 th	Chapters 16 & 17
Assignment #3	Wednesday, November 19 th	Wednesday, December 3 rd	Chapters 18 & 19
Exam #2	Wednesday, December 10 th		Chapters 13 through 19 and ANOVA chapter

Academic Misconduct: A Bloustein School Perspective

Academic misconduct includes cheating, plagiarism, failure to cite sources, fabrication and falsification, stealing ideas, and deliberate slanting of research designs to achieve a pre-conceived result. We talk about misconduct and ethical behavior in classes and expectations are set forth in student handbooks and catalogues. For example, it is presented on pages 545-547 in the New Brunswick Undergraduate Catalogue for the years 2003 through 2005 and on pages 16-18 of the Edward J. Bloustein catalogue for the years 2003 through 2005. We are not repeating that material here. Note, however, that penalties for misconduct can range from failing an assignment/exam or dismissal from the university.

The Bloustein School is appending this memorandum to your course syllabus because we recently have detected obvious cases of plagiarism. We have found far fewer cases of other forms of academic misconduct, but we find several every year. It is imperative that you understand that unethical academic conduct is intolerable, and it is completely preventable.

Academic misconduct almost always happens for two reasons. One is ignorance of academic rules and practices. For example, in virtually every recent plagiarism case in the School, material has been taken from an Internet site and placed in text without appropriate note or attribution. **You must learn the proper rules for attribution. If you are not sure, ask your instructor! If you do not know the rules that govern the use of data sets, attribution, analysis and reporting of these sets, the faculty will help you. There is no such thing as a stupid question regarding this subject.**

Pressure is the second common reason for academic misconduct. Students, faculty, all of us are subject to deadline, financial, self-worth, peer, and other pressures. If you are potentially allowing pressure to drive you to misconduct, please step back and resist that urge. You can cope with pressure in a positive way by reaching out to friends, counselors, and faculty members. Within the Bloustein School community, you will find understanding people and positive direction.

The Bloustein School plays an important role in the planning and public policy agenda. Our work and our students must be above reproach.

Part I:***Problem definition; research conceptualization;
measurement; and experimental design***

Lecture: Wed. Sept. 3 Introduction / overview / review syllabus & course protocol
Chapter 1: The Scientific Approach

Lab: Mon. Sept. 8 Appendix A: Introduction to SPSS

Lecture: Wed. Sept. 10 Chapter 2: Conceptual Foundations of Research
Chapter 3: Elements of Research
Chapter 4: Ethics in Social Science Research

Lab: Mon. Sept. 15 SPSS Exercises: Chapter 3, pg. 66

Lecture: Wed. Sept. 17 Chapter 5: Research Designs: Experiments
Chapter 6: Research Designs: Cross-Sectional and
Quasi Experimental Designs

Lab: Mon. Sept. 22 SPSS Exercises: Chapter 7, pg. 159

Lecture: Wed. Sept. 24 Chapter 7: Measurement
Chapter 8: Sampling and Sample Design
Chapter 9: Observational Methods

Lab: Mon. Sept. 29 SPSS Exercises: Chapter 8, pg. 185

Exam: Wed. Oct. 1 Exam #1 (on Chapters 1 through 9)

Part II:***Statistics for research: descriptive statistics;
inferential statistics; and association***

Lab:	Mon.	Oct.	6	SPSS Exercises: Chapter 14, pg. 316
Lecture:	Wed.	Oct.	8	Chapter 13: Secondary Data Analysis Chapter 14: Data Preparation and Analysis Assignment #1 distributed

Lab:	Mon.	Oct.	13	SPSS Exercises: Chapter 15, pg. 349
Lecture:	Wed.	Oct.	15	Chapter 15: The Univariate Distribution

Lab:	Mon.	Oct.	20	Assignment #1
Lecture:	Wed.	Oct.	22	Chapter 16: Bivariate Analysis Assignment #1 due
Lab:	Mon.	Oct.	27	SPSS Exercises: Chapter 16, pg. 383-384

Lecture:	Wed.	Oct.	29	Chapter 17: Control, Elaboration, and Multivariate Analysis
Lab:	Mon.	Nov.	3	SPSS Exercises: Chapter 17, pg. 411

Lecture:	Wed.	Nov.	5	Chapter 18: Index Construction and Scaling Methods Assignment #2 distributed
Lab:	Mon.	Nov.	10	SPSS Exercises: Chapter 18, pg. 432

Lecture:	Wed.	Nov.	12	Chapter 19: Inferences
Lab:	Mon.	Nov.	17	Assignment #2
Lecture:	Wed.	Nov.	19	Knoke & Bohrnstedt, Chapter 4: Analysis of Variance [on Sakai] Assignment #2 due Assignment #3 distributed
Lab:	Mon.	Nov.	24	SPSS Exercises: Chapter 19, pg. 452-453

Lab:	Mon.	Dec.	1	Assignment #3
Lecture:	Wed.	Dec.	3	Catch-up, and, Full Course Review / Exam Prep Assignment #3 due

Lab:	Mon.	Dec.	8	Open Session / Catch-up and Review
Exam:	Wed.	Dec.	10	Exam #2 (on Chapters 13 through 19)
