Online Introduction to Data Analysis  
*Sociology 1015: Spring 2009*

**Instructor:**

Daniel Poole  
Office Hours: BEH S 330; By appointment  
Email: [daniel.poole@soc.utah.edu](mailto:daniel.poole@soc.utah.edu)

**Course Content and organization:**

This course is an introduction to basic forms of data presentation and analysis. By *data*, we mean all sorts of empirical observations that we use to support or oppose an argument. This course focuses on quantitative data – data that are presented in numerical form. *Presentation* refers to the multiple ways that data are summarized and made accessible (e.g. tables, charts, trendlines, scatterplots, etc.). You will be introduced to several different analytical methods including cross-tabulation, correlation, regression, and others. The course will also expose you to some basic research concepts including sampling, causation, as well as independent and dependent variables. The main goal of the course is to introduce you to basic tools of data analysis and presentation, as well as helping you to understand the underlying logic. We will not be dealing with statistical formulas and calculations, rather we will focus on becoming familiar with using data to interpret and explain social phenomena in the world around us.

It is important to begin with the understanding that data analysis is not just for so-called “experts.” The tools and concepts taught in this class are not just for those “producing” the data, but also for the “consumers” of data. We all are consumers of data at some level. We are constantly made aware of data within our worlds, from the trivial to the essential: “4 out of 5 dentists recommend” and “less than two out of five Americans support…” It is important to be able to process and think critically about the information we encounter every day – be it as students in a sociology class, consumers at the shopping mall, or as citizens in a democracy. This class is designed to help you become better “consumers” of data. It is also designed to create a solid foundation for the subsequent courses taught in the sociology major (especially statistics). It should also provide a useful base for those of you who will eventually go on to become producers of data in the form of your own research.

The course is organized around a workbook accompanied by a user-friendly data analysis software program called Student ExplorIt. The program can be installed from the CD and 3.5” diskette included in the workbook or from the files posted on the course homepage on WebCT. The program utilizes a variety of data which sociologists find particularly interesting. For example surveys addressing social attitudes across the United States, rates of suicide across nations, measures of economic development across the globe, and many more. You will learn about the world around you while acquiring basic analytical tools. For each chapter you will complete an online exercise that uses the program to answer a series of questions about the results including objective measures and subjective interpretations. The exercises will encourage
you to explore patterns in the data, conduct basic analysis, and interpret the results.

Text:

**Course Requirements and Grading Criterion:**

The course will consist of 15 chapters, each with an assignment. Each student is required to submit their own work! Cheating will not be tolerated. Any student caught cheating will receive a zero and may face more severe consequences depending on the situation. As a student you have both rights and responsibilities that are outlined in the Student Handbook. I would recommend that you become familiar with the University regulations which also provide me as your instructor with rights and responsibilities as well. It is recommended that you complete the assignment in your workbook first, and then submit your answers online. While the workbook questions do not match the online questions perfectly, it will be less stressful if you have already completed the workbook. You will also want to complete your workbook in order to use it as a study guide for the final exam. Each chapter will have a supplemental introduction which can be found on WebCT. This will be relevant information that should help clarify confusing topics, and even provide answers to some of the more difficult questions! These short (2-3 pages) readings are required.

Assignments will be due on Friday each week. Due dates are listed on the course schedule below. **Late assignments will be subject to a 10 point penalty.** Because exercises will be completed online, students must have regular access to a computer that is connected to the Internet. For those without computer access, the software is available on the PCs in the MultiMedia Center in the Marriott Library.

You are encouraged to retake any assignment on which you score below 90 percent, not only to raise your score, but to ensure that you have a clear understanding of the material. When you retake an assignment, both scores are averaged for the final grade. You will have one week after the due date to resubmit an exercise. More specific information will be emailed to you.

**Final Exam**

In addition to 15 weekly exercises, you will have to take and pass a final examination during finals week. The exam will be comprehensive, covering the material addressed throughout the semester. The format will be very similar to weekly exercises except that it will be taken on paper and not on a computer. **You must score a C or higher on the final exam to pass the course.** UOnline will administer the final exam and will contact you via email for scheduling. There are many testing locations both on and off campus. You will receive more information regarding the final exam later in the semester.
Grading Criteria

Weekly exercises  75%  (15 exercises at 5% each)
Final examination  25%

Grades will be calculated as follows: 100-90 = A; 90-80 = B; 80-70 = C; 70-60 = D; below 60 = F; within each range, 0 to 2.99 will earn a minus, 7 to 9.99 will earn a plus.

Americans with Disabilities Act (ADA) Statement

The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations.

Course Schedule:

First Week:  Getting Started (pp. vii – xii) and Exercise 1 (pp. 1 - 15)

The task for the first week is to install Student ExplorIt onto your computer and complete the first exercise. There is an introductory chapter that will help you become more familiar with the program. Your assignment includes emailing the instructor during the first 2 days of class (January 12 and 13) to let him know that you have successfully downloaded the program and have gone through the introduction – or to let him know about any problems that need to be solved. Everyone needs to be up and running and have the first assignment completed by the end of the first week (January 16).

DUE DATES:

January 16:  Exercise 1: Suicide and Social Facts

Data on suicide were the basis for one of the earliest pieces of classic sociological research – so it’s a good place to start your study of data analysis! In this chapter, you’ll explore attitudes about suicide taken from a large national and international surveys, as well as
differences in suicide rates across both states and countries. You’ll begin with distributions of single variables (univariate distributions) and move to cross-tabulations that allow us to examine the possible relationship between variables.

**January 23:**  **Exercise 2: Sex and Sampling**

We certainly hear a lot about sex in popular culture—and see quite a bit of it as well! How much of what we hear and see is an accurate representation of people’s lives? In this chapter, we explore data that will begin to answer questions about how much sex people have, and how it is related to a variety of other characteristics. We’ll also learn why surveys conducted on relatively small sample sizes can accurately tell us a great deal about a whole population.

**January 30:**  **Exercise 3: Comparisons and Correlation**

“Correlation” is one of the most basic and important concepts in social scientific research. It refers to the extent to which the level of one variable (like per capita wealth) and that of another variable (like automobile ownership) tend to be related. You’ll learn some basic tools that allow social scientists to visually represent and systematically measure that kind of relationship.

**February 6:**  **Exercise 4: Socialization: Gender Roles**

“Men are from Mars and women are from Venus”—at least, that’s what we’re socialized to think. But are they really? In this chapter, you’ll look at some cross-national survey data that will allow you to examine differences in gender roles across nations. You’ll also examine survey data from the United States that compares attitudes across different gender roles at home and in the workplace.

**February 13:**  **Exercise 5: Deviance**

Why is it that the modern world seems so wrought by “social pathologies” like drug and alcohol abuse? Here you will consider some classic sociological ideas about social disorganization—its causes and consequences. You’ll examine correlation matrices (i.e. tables that look at the relationships among multiple pairs of variables) to see how economic development and social mobility is (or isn’t) related to those problems.

**February 20:**  **Exercise 6: Stratification**

All known human societies have been stratified to some degree (characterized by structured inequalities). But the differences in the level of inequalities across societies are vast. This chapter presents data from “traditional” societies with different social structures and at different levels of development, and allows you to examine how those differences are related to levels of inequality. This chapter also looks at contemporary societies, so you can see how the
February 27: \textit{Exercise 7: Intergroup Relations}

Prejudice and discrimination are a part of our world that most would like to see disappear, but remain clearly entrenched. This chapter will allow you to compare measures of prejudice across societies. Some of the patterns may surprise you! You’ll also be able to compare states and counties across the United States to see which are the most diverse. See how Utah compares to the rest of the nation.

March 6: \textit{Exercise 8: Marital Satisfaction}

We hear a lot about the decline of marriage in modern society, but it’s still a central social institution. This chapter will allow you to look at the changing patterns of marriage and divorce, and to compare how satisfied (or dissatisfied) people are with their “domestic” lives across states and around the world.

March 13: \textit{Exercise 9: Religion}

Social scientists (and many others) have predicted the end of religion for centuries—a prediction known as secularization thesis. However, this prediction has not yet come to pass. Still, levels of religiosity vary greatly even within a single society like the United States. Here you’ll examine those patterns—and it may make you think a little differently about religion.

March 20: \textit{SPRING BREAK! No assignment due.}

March 27: \textit{Exercise 10: Job Satisfaction}

Winning the lottery, quitting my job, and living a life of leisure—truly this is the American dream! Once again, the data might suggest something very different. In this chapter, you’ll examine attitudes towards work in the U.S. and in other countries.

April 3: \textit{Exercise 11: A Century of Trends}

One of the most important dynamics of any data is how they change over time. This chapter focuses on time series data—and how sociologists present those data in the form of trend lines. You will examine trends in variables that have a basic impact on population growth (and decline) –like fertility, diseases, and life expectancy. These are the basics of the demographer’s toolbox!

April 10: \textit{Exercise 12: Diffusion and Cultural Complexity}

Human beings are tremendous innovators, but individual innovations are not the primary reason why we have developed such complex cultures and societies. The more important reason is diffusion—a great invention like the wheel rolls around the world pretty quickly! What makes some societies so open to diffusion, while others are so isolated?
April 17:  Exercise 13: Fertility

There are well over six billion people on the earth now, and whether that total climbs to nine, twelve, fifteen, or even higher in the coming decades has important implications for all life on earth. Patterns of fertility are therefore of crucial interest to sociologists. This chapter presents data on differences in fertility rates across societies and over time—and will prompt you to consider the causes of those differences.

April 24:  Exercise 14: Regression

By now you should be comfortable with systematically measuring the relationship between two variables. In the social sciences we’re mostly interested in patterns of relationships between many variables at a time so we rely heavily on multivariate analysis—more specifically, on multiple regression. It’s a bit busier, but based on all of the ideas that you already know. Here you will see that sometimes the relationships between variables are misleading unless you consider other variables at the same time.

April 29:  Exercise 15: Spuriousness

“Correlation” as the old saying goes “does not prove causation.” Spurious is a fancy word that just means false—so a spurious correlation is a relationship that isn’t a cause-and-effect relationship but one where another (sometimes invisible) variable is at the root of things. In this chapter, those invisible variables will be brought out into the open.

TBA (May 1-7):  Final Examination

Students will sign up for an examination time slot via the UOnline website: www.uonline.utah.edu. There will be many times as well as locations available for the exam. (The UOnline Test Coordinator will contact students to schedule the exam).

*This syllabus is subject to change at any time. Updates will be sent via email or updated on WebCT and will be considered as obligatory as the information in the syllabus itself.

Please contact me with any questions. Learning in the online environment can
create new challenges for students. I am here to help and glad to do so.

Good luck with the semester!