

**Syllabus**  
**Soc. 365**  
**Data Management for Sociological Research**  
**Spring 2018**

**General information:**

Time: Mondays 9:55-11:50am  
Room: 3218 Sewell Social Science Building  
Instructor: Christine Schwartz  
Office: 4458 Social Science Building  
Email: cschwart@ssc.wisc.edu  
Office Hours: Wednesdays 10:15-11:15am or by appointment

**Course description:** This is a course in how to manage social scientific data. Statistics courses in Sociology (and other social sciences) provide students with a solid theoretical understanding of data analysis but typically do not provide sufficient training in how to actually prepare and work with real data to apply those analytical tools. Because the large majority of research time (in any research job) is spent on data management, this is an important shortcoming in your training. By the end of this course you will understand the structure of different types of social scientific data, how to clean messy data, how to effectively document data, how to merge data from multiple sources, and how to restructure data for analysis.

You will also learn techniques for visual display of data (i.e., graphing) to identify patterns and problems and to effectively convey information to consumers of your research. To this end, we will work with a widely used software package for the management and analysis of social scientific data (Stata). Hands-on, nuts and bolts work will be supplemented throughout the semester with discussion of the bigger picture – why is careful and effective data management and preparation so essential? You will also have a chance to work with a publicly available data set of your choosing to examine a question that interests you.

This is not a statistics course but a prior or concurrently taken statistics course—e.g., Soc. 360, or the equivalent—is required so that everyone has a baseline understanding of the statistics we will be working with. Knowing how and when to use basic descriptive statistics such as two-way tables, means, and correlations will be reviewed and is a required part of the course. No previous experience with Stata is necessary, but again, any familiarity you have with the program or similar programs (SPSS, SAS, etc.) will certainly be a plus. There are many on-line resources for learning Stata and for troubleshooting – you may want to explore some of the sites at <http://www.stata.com/links/resources-for-learning-stata/>.

**Canvas Course URL:** I have set up a page for the course on Canvas <https://canvas.wisc.edu/courses/87870>, which will contain this syllabus, slides from class, weekly assignments, and additional readings.

**Course Designation and Attributes:** Honors optional

**Instructional Mode:** Face-to-face

**Credits:** 3-credits. The credit standard for this course is met by an expectation of a total of 135 hours of student engagement with the course learning activities (at least 45 hours per credit), which include regularly scheduled instructor-student meeting times during class of 115 hours per week. The additional time is spent on required readings, problem sets, a final project, significant independent engagement with a data set of the students' choice for the final project, and other student work as described in the syllabus.

**Prerequisites:** This course is open to graduate students and upper-level undergraduates. Sociology 360 or the equivalent, or Sociology 357 or the equivalent are required. Concurrent enrollment is permitted. Exceptions may be made with the instructor consent.

**Required textbooks:**

Michael N. Mitchell, *Data Management Using Stata: A Practical Handbook*. (Available at UBS)

The data sets used in this book can be downloaded from:  
<http://www.stata-press.com/data/dmus.html>.

These files will allow you to replicate all of the examples in the book. We will download these files on the first day of class.

**Computing:** All assignments will require manipulation of sample survey data, using the statistical package Stata. There are many other similar statistical packages but I think that Stata offers the best combination of power, flexibility, and ease of use. For those of you thinking about graduate school in Sociology or another social science, this course will be an excellent opportunity to master the leading software package.

Stata is available via Winstat, meaning that you can do your work from any computer as long as you have an internet connection. An introduction to Winstat will be provided on the first day of class. You may also download a copy of Stata for free onto your own computer from the campus software library (<https://www.doit.wisc.edu/services/software/>). There are a number of types of Stata you can download. I recommend Stata/SE. While it is sometimes convenient to have Stata on your own machine, all instruction will be done in Winstat and there are complications with moving back and forth between file locations. Therefore, I recommend always using Stata on Winstat until you are quite comfortable with the programming environment.

Even experienced Stata users frequently use the help manuals. These are available electronically via Winstat. To access Stata manuals, you can just click on Start and Stata in Winstat – the

manuals are in pdf format. Another quick way to find help (and my preferred option) is to Google your Stata question.

In addition to Stata (and other statistical resources available via Winstat), SSCC provides statistical consulting to students in this course. You may stop by 4226 Social Science to talk with Russell Dimond, Doug Hemken, or Mark Banghart if you need help. You can always email me or stop by my office hours as well. If you have a STATA question, don't beat your head against a brick wall for too long, but also please attempt to figure things out on your own before seeking help.

### **Course Requirements:**

- Class participation: You are expected to complete the assigned reading before each class. Lectures and in-class work will assume that you have read the assigned materials. Valuable class time is reserved for hands-on work, examples, discussion, and clarification. Class participation will not factor into your grade directly but you should assume that it will have an indirect impact (via your ability to complete the homework assignments and the quality of your final project and exam). Lecture slides will be posted on the course webpage but may not contain all the important information covered in class. If you are unable to attend for some reason, you should arrange to catch up on what you missed from another student. Write the contact information for one of your classmates below:

Name: \_\_\_\_\_

Email: \_\_\_\_\_

- Weekly Exercises: Exercises are due before class the week after they are assigned. We do not have a TA or grader. Thus, I will post model answers and allocate some class time the following week to discuss questions about the assignments. Late exercises will not be accepted. If for some reason you do not complete your assignment on time, I encourage you to complete it on your own, but I will not accept it for credit. Students will not get credit for assignment that are turned in that have substantial problems or are incomplete. Because I understand that sometimes unanticipated events occur, your lowest homework score will be dropped.

These assignments will count for 30% of your final grade so it is in your best interest to complete and submit these on time. They will be graded as either receiving "full credit"=1 or "no credit"=0. Assignments that are turned in on time, are complete, and demonstrate thought and effort will be given full credit. Assignments that are not turned in on time, are incomplete, or indicate substantial lack of effort will be given 0s. Putting effort into the homework and learning from the feedback you receive is the best way to do well on the exam and final project.

I encourage you to work together to complete the assignments, but you must turn in individual assignments. Everyone should put effort into answering all the questions, but discussion and collaboration with others is acceptable and useful. In this context, it is

academically dishonest to simply copy other people's work, but working together in the spirit of learning is encouraged. Putting effort into the homework and learning from the feedback you receive is the best way to do well on the exams and final project.

Please submit all assignments via the Canvas "Assignments" page by 9:50am (right before class) on the date that they are due. This deadline is firm.

- **Tests:** There will be two open-book exams on which you will be asked to conduct a series of data manipulations similar to those covered in the text and the weekly assignments. The second test will be non-cumulative, although much of the knowledge gained in the first half of the class will be necessary to carry out the tasks in the second half. The tests will count for 40% of your final grade (20% x 2).
- **Project:** The course will culminate in a research project in which you will use the technical and analytic skills developed in class to address a research question of your choosing. This project will involve choosing a publicly available data set (in consultation with the instructor), carefully describing those data, addressing missing data, conducting consistency checks, recoding variables, and preparing basic descriptive results to answer your question. This project will count for 30% of your final grade in the course. I will provide detailed instructions for the project early in the semester. **No late projects will be accepted.**

### **Grading:**

Final grades will be allocated as follows,

- Weekly assignments: 30%
- Final project: 30%
- Tests I & II: 40% (20% each)

I assign grades based on the following cut points,

A	100-92
AB	91-88
B	87-80
BC	79-76
C	75-66
D	65-50
F	< 50

If necessary, I will curve grades up. I never curve grades down.

**Accommodations.** The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Please send the instructor an email by the end of the second week of the course if you are eligible for special arrangements or accommodations for testing, assignments, or other aspects of the course. This may be the case if English is your second language or you experience a physical or psychological condition that makes it difficult for you to complete assignments and/or exams

without some modification of those tasks. Accommodations are provided for students who qualify for disability services through the McBurney Center. Their website has detailed instructions about how to qualify: <http://www.mcburney.wisc.edu/>. Provide a copy of your accommodations request (VISA) to the instructor by the end of the second week of class. We try to reserve rooms and proctors by the third week in class, so we must know of all accommodations by then. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA.

If you wish to request a scheduling accommodation for religious observances, send an email by the end of the second week of the course stating the specific date(s) for which you request accommodation; campus policy requires that religious observances be accommodated if you make a timely request early in the term. See the university's web page for details: <https://kb.wisc.edu/page.php?id=21698>.

**Sexual harassment and misconduct.** Professional conduct and appropriate behavior are critical to create a safe learning environment for students and instructors alike. Here is a statement about sexual harassment from the University:

#### **What is Sexual Harassment?**

Unwelcome sexual advances, requests for sexual favors, and verbal or physical conduct of a sexual nature constitute sexual harassment when:

- submission to such conduct is a condition of employment, academic progress, or participation in a university program; or
- submission to or rejection of such conduct influences employment, academic or university program decisions; or
- the conduct interferes with an employee's work or a student's academic career, or creates an intimidating, hostile or offensive work, learning, or program environment.

Tangible Action or Quid Pro Quo (This for That) Sexual Harassment and Hostile Environment Sexual Harassment are both illegal and unacceptable.

One practical implication is that instructors (faculty or graduate students) may not date students to whom they will be assigning grades. If you believe that you have been harassed, contact your instructor or the chair of the Department of Sociology ([socchair@ssc.wisc.edu](mailto:socchair@ssc.wisc.edu)).

**Academic honesty.** By enrolling in this course, each student assumes the responsibilities of an active participant in UW-Madison's community of scholars in which everyone's academic work and behavior are held to the highest academic integrity standards. Academic misconduct compromises the integrity of the university. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these acts are examples of academic misconduct, which can result in disciplinary action. This includes but is not limited to failure on the assignment/course, disciplinary probation, or suspension. Substantial or repeated cases of misconduct will be forwarded to the Office of Student Conduct & Community Standards for additional review. For more information, refer to [studentconduct.wiscweb.wisc.edu/academic-integrity/](http://studentconduct.wiscweb.wisc.edu/academic-integrity/).

According to UWS 14, academic misconduct is defined as:

- Seeks to claim credit for the work or efforts of another without authorization or citation;
- uses unauthorized materials or fabricated data in any academic exercise;
- forges or falsifies academic documents or records;

- intentionally impedes or damages the academic work of others;
- engages in conduct aimed at making false representation of a student's academic performance;
- assists other students in any of these acts.

For a complete description of behaviors that violate the University's standards as well the disciplinary penalties and procedures, please see the Dean of Students website. If you have questions about the rules for any of the assignments or exams, please ask your instructor.

**Departmental notice of grievance and appeal rights.** The Department of Sociology regularly conducts student evaluations of all professors and teaching assistants near the end of the semester. Students who have more immediate concerns about this course should report them to the instructor or to the chair, 8128 Social Science (socchair@ssc.wisc.edu).

**Department learning objectives.** Beyond the specific substantive and methodological content I will cover in this course, I have designed this course to achieve the following instructional objectives designated as priorities by the Department of Sociology:

*Conduct Research and Analyze Data.* Although professional-quality research requires graduate-level training, we expect that all undergraduate majors will be able to conduct small-scale research in which they formulate a research question, collect data, analyze results, and draw conclusions.

*Communicate Skillfully.* Sociology majors write papers and make oral presentations that build arguments and assess evidence in a clear and effective manner.

*Prepare for Graduate School and the Job Market.* Students use their social research skills to identify opportunities for employment or further study, assess their qualifications for these opportunities, and identify strategies for gaining the necessary knowledge and experience to improve their qualifications. Students are encouraged to develop and maintain portfolios of their written work and educational experiences to aid them in preparing applications.

*Improve Project Management Skills.* Students will improve their skills in time management, ordering and executing a series of complex and inter-related tasks, and integrating distinct components of a project into a final product.

## Course content:

Week 1 (Jan 29): Introduction. Getting onto Winstat. What do data look like? Why is data management so important? Basics of data structure and do files. Inputting data into Stata.  
Reading: Mitchell, Chapters 1 and 2  
Assignment: Exercise 1

Week 2 (Feb 5): Data cleaning  
Reading: Mitchell, Chapter 3  
Assignment: Exercise 2  
Due: Exercise 1

Week 3 (Feb 12): Labeling, codebook, documentation, and fact-checking  
Reading: Mitchell, Chapter 4; Long Chapter 2  
Assignment: Exercise 3  
Due: Exercise 2

Week 4 (Feb 19): Recoding, creating new variables  
Reading: Mitchell, Chapter 5  
Assignment: Exercise 4  
Due: Exercise 3

Week 5 (Feb 26): Basic descriptive statistics (tabulation and summarization)  
Reading: Kohler and Kreuter Chapter 7  
Assignment: Exercise 5  
Due: Exercise 4  
Due: Final project proposal

Week 6 (Mar 5): Missing data  
Reading: Allison Chapter 1  
Assignment: Exercise 6  
Due: Exercise 5

Week 7 (Mar 12): Test I

Week 8 (Mar 19): Combining data sets  
Reading: Mitchell, Chapter 6  
Assignment: Exercise 7  
Due: Exercise 6

Week 9 (Mar 26): **Spring Break – No Class**

Week 10 (Apr 2): Processing observations across subgroups  
Reading: Mitchell, Chapter 7  
Assignment: Exercise 8  
Due: Exercise 7  
Due: Preliminary descriptive statistics for final project

Week 11 (Apr 9): Reshaping data (longitudinal data)

Reading: Mitchell, Chapter 8

Assignment: Exercise 9

Due: Exercise 8

Week 12 (Apr 16): Programming for data management

Reading: Mitchell, Chapter 9

Assignment: Exercise 10

Due: Exercise 9

Week 13 (April 23): Paper preparation, extensions, review

Reading: None

Due: Exercise 10

Week 14 (April 30): Test II

Friday, May 11<sup>th</sup>, 12:25pm: Final draft of term papers due to Canvas assignment folder.