

**Sociology 704 Research Methods
Advanced Analytical Techniques
Spring 2016**

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COURSE OBJECTIVES

Although social scientists approach their research from various perspectives, it is increasingly important for sociologists to have an understanding of quantitative methods and statistical techniques. A glance through any of the top sociological journals demonstrates that sociologists frequently use statistical methods as tools in describing data and making decisions under conditions of uncertainty. This course will provide an introduction to descriptive and inferential statistics with an emphasis on sociological applications. We will also introduce simple and multiple linear regression analysis, which is one of the most commonly used statistical techniques in the social sciences. Our primary objective in this course is to empower you to read, critically evaluate, and understand others' research and use statistical analysis to answer research questions. By the end of the course you should be able to engage in basic quantitative analyses and understand/interpret published research that uses regression analysis.

I begin this course with the assumption that students have no background in multivariate statistics. Thus, we will start with basic concepts of statistical description and inference that underlie multiple regression. As the course progresses, the material will build upon itself so that the material we cover in later classes assumes that you have a solid understanding of the previous material. Therefore, I encourage you to keep up with lecture material on a weekly basis, to practice with problems on your own, complete the weekly homework assignments, ask questions in class, and seek help from the instructor, TA and each other earlier rather than later.

Specific Learning OBJECTIVES

After taking this course, students will be able to...

1. Demonstrate understanding of basic statistical concepts covered in this course.
2. Propose statistically sound analytic strategies according to the data to be examined.
3. Explain the basic statistical methods in the public articles in social science journals.
4. Independently learn more advanced methods built on the concepts and techniques covered in this course.

COURSE MATERIALS

The following are required materials for this course:

- Frankfort-Nachmias, Chava and Anna Leon-Guerrero. 2015. *Social Statistics for a Diverse Society, 7th Edition*. Thousand Oaks, CA: Pine Forge Press.
- Holcomb, Zealure C. 2014. *Interpreting Basic Statistics, 7th Edition*. Pyrczak Publishing.
- Scientific calculator: this could be a built-in calculator of your laptop computer, tablet, smart phone and other portable devices. (No need to purchase a scientific calculator).

COURSE REQUIREMENTS

Attendance

Your attendance is required for both the class itself and the computer lab. Our class time together is extremely important for two reasons. First, it provides you with the opportunity to ask questions and receive clarification and to work out problems together. Second, our class interactions allow me to assess your level of understanding and engagement with the material. If you must miss class you are responsible for getting notes and announcements from a fellow student. Students who miss more than 5 seminar meetings will automatically receive no better than a B- for their final course grade. Attendance sheet will be distributed in the first class.

Communication

By principal, you need to use your Rebel Mail for any communication with the instructor. This is to ensure the security of private information as well as to avoid any technical problems.

Homework

The best way to learn statistics is to work with them regularly. You will be assigned weekly homework from the text. Complete the assigned problems in the textbook according the course schedule. Please come to class prepared to give your answers to homework problems and ready to answer and ask questions. Homework will be collected each week and will be graded for completeness. Homework may also include handouts and additional practice problems distributed in class.

How to submit your work

You will type all your work, save them as Microsoft Word file and upload the assignment to the assigned WebCampus page. If you must hand-write any piece of work, you will need to scan, save and submit them as PDF files.

Lab

A lab accompanies and is required for the successful completion of this course. The lab will introduce you to SPSS, which is a commonly used statistical analysis program. The goal of the lab is to familiarize yourself with SPSS and practice the statistical techniques you learn in class using real social science data. The lab will include a series of homework assignments, which will be on a separate syllabus.

A Note about Working Together

I encourage you to compare results with other students on your homework and lab assignments. However, note that the final product you submit on any assignment in this class must be your own work. You will be required to complete problems similar to your homework on the quizzes and the final exam and therefore it is in your best interest to ensure that you know how to work through the problems on your own before comparing your results with others.

Quizzes

We have four scheduled in-class quizzes. You cannot make up a quiz. Quizzes will cover any material from class, lab, and your homework. I will provide a formula page with your quiz for your reference. As with the homework, you must show all of your work on quizzes. Your grade is based not only on the final answer, but also on how you arrived at that answer. You may receive partial credit on problems, and if you do not show your work you will only receive partial credit. Do not forget your calculator on a quiz day; a forgotten calculator is not an excuse for missing a quiz or doing poorly.

Final Exam

Due to the nature of the material, the final exam is cumulative. The final exam consists mainly of the previous assignment and quiz questions. There will be NO MAKEUP EXAMS. If you are unable to meet the scheduled exam date, you must arrange an alternative date with me PRIOR TO the scheduled one. This will only be allowed under extreme circumstances. NOTE: The final exam will be given on the allotted time on the scheduled day—NO EXCEPTIONS. Remember this when making vacation plans.

Evaluation *Extra credit assignments may be available.

Quizzes	75 points x 4 = 300
Homework	25 points x 10 = 250
Final Exam	100 points x 1 = 100
Attendance	50 points x 1 = 100
Lab	30 points x 10 = 300
Total	1000 points

Grading

Grades are based on the following. Please note that this scale continues into the F range.

A	93-100	B	83-87
A-	90-92	B-	80-82
B+	88-89		

COURSE & UNIVERSITY POLICIES

Academic Misconduct— Academic integrity is a legitimate concern for every member of the campus community; all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility and professionalism. By choosing to join the UNLV community, students accept the expectations of the Student Academic Misconduct Policy and are encouraged when faced with choices to always take the ethical path. Students enrolling in UNLV assume the obligation to conduct themselves in a manner compatible with UNLV's function as an educational institution.

An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of another, from the Internet or any source, without proper citation of the sources. See the Student Academic Misconduct Policy (approved December 9, 2005) located at: <https://www.unlv.edu/studentconduct/student-conduct>.

Copyright

The University requires all members of the University Community to familiarize themselves with and to follow copyright and fair use requirements. You are individually and solely responsible for violations of copyright and fair use laws. The university will neither protect nor defend you nor assume any responsibility for employee or student violations of fair use laws. Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional information can be found at: <http://www.unlv.edu/provost/copyright>.

Disability Resource Center (DRC)— Disability Resource Center (DRC)—The UNLV Disability Resource Center (SSC-A 143, <http://drc.unlv.edu/>, 702-895-0866) provides resources for students with disabilities. If you feel that you have a disability, please make an appointment with a Disabilities Specialist at the DRC to discuss what options may be available to you. If you are registered with the UNLV Disability Resource Center, bring your Academic Accommodation Plan from the DRC to the instructor during office hours so that you may work together to develop strategies for implementing the accommodations to meet both your needs and the requirements of the course. Any information you provide is private and will be treated as such. To maintain the confidentiality of your request, please do not approach the instructor in front of others to discuss your accommodation needs.

Religious Holidays Policy— Any student missing class quizzes, examinations, or any other class or lab work because of observance of religious holidays shall be given an opportunity during that semester to make up missed work. The make-up will apply to the religious holiday absence only. It shall be the responsibility of the student to notify the instructor within the first 14 calendar days of the course for fall and spring courses (excepting modular courses), or within the first 7 calendar days of the course for summer and modular courses, of his or her intention to participate in religious holidays which do not fall on state holidays or periods of class recess. For additional information, please visit: <http://catalog.unlv.edu/content.php?catoid=6&navoid=531>.

Transparency in Learning and Teaching—The University encourages application of the transparency method of constructing assignments for student success. Please see these two links for further information:

<https://www.unlv.edu/provost/teachingandlearning>

Incomplete Grades—The grade of I—Incomplete—can be granted when a student has satisfactorily completed three-fourths of course work for that semester/session but for reason(s) beyond the student’s control, and acceptable to the instructor, cannot complete the last part of the course, and the instructor believes that the student can finish the course without repeating it. The incomplete work must be made up before the end of the following regular semester for undergraduate courses. Graduate students receiving “I” grades in 500-, 600-, or 700-level courses have up to one calendar year to complete the work, at the discretion of the instructor. If course requirements are not completed within the time indicated, a grade of F will be recorded and the GPA will be adjusted accordingly. Students who are fulfilling an Incomplete do not register for the course but make individual arrangements with the instructor who assigned the I grade.

Tutoring and Coaching—The Academic Success Center (ASC) provides tutoring, academic success coaching and other academic assistance for all UNLV undergraduate students. For information regarding tutoring subjects, tutoring times, and other ASC programs and services, visit <http://www.unlv.edu/asc> or call 702-895-3177. The ASC building is located across from the Student Services Complex (SSC). Academic success coaching is located on the second floor of the SSC (ASC Coaching Spot). Drop-in tutoring is located on the second floor of the Lied Library and College of Engineering TEB second floor.

UNLV Writing Center—One-on-one or small group assistance with writing is available free of charge to UNLV students at the Writing Center, located in CDC-3-301. Although walk-in consultations are sometimes available, students with appointments will receive priority assistance. Appointments may be made in person or by calling 702-895-3908. The student’s Rebel ID Card, a copy of the assignment (if possible), and two copies of any writing to be reviewed are requested for the consultation. More information can be found at: <http://writingcenter.unlv.edu/>.

Rebelmail—By policy, faculty and staff should e-mail students’ Rebelmail accounts only. Rebelmail is UNLV’s official e-mail system for students. It is one of the primary ways students receive official university communication such as information about deadlines, major campus events, and announcements. All UNLV students receive a Rebelmail account after they have been admitted to the university. Students’ e-mail prefixes are listed on class rosters. The suffix is always @unlv.nevada.edu. Emailing within WebCampus is acceptable.

Final Examinations—The University requires that final exams given at the end of a course occur at the time and on the day specified in the final exam schedule. See the schedule at: <http://www.unlv.edu/registrar/calendars>.

Library statement:

Students may consult with a librarian on research needs. For this class, the Subject Librarian is (https://www.library.unlv.edu/contact/librarians_by_subject). UNLV Libraries provides resources to support students’ access to information. Discovery, access, and use of information are vital skills for academic work and for successful post-college life. Access library resources and ask questions at <https://www.library.unlv.edu/>.

Course Outline, Reading Assignments, & Other Important Dates

This schedule is tentative and Subject to Change. Changes will be announced in class or in lab.

Module	Date	Topic	Read	Homework***	Quizzes
01	JAN26	Introduction to Social Statistics; Levels of Measurement	Syllabus SSDS Ch 1		
02	FEB01	Frequency Distributions, Graphic Presentations, Measures of Central Tendency	SSDS Chs 2, 3, & 4		
03	FEB08	Special Topic: Quantitative Literacy in Social Science			
	FEB15	Washington's Birthday Recess			
04	FEB22	Measures of Dispersion	SSDS Ch 5	SSDS Ch1 Ex #3 & 9 IBS Ex #4 & 11	Quiz 1 Chapters 1, 2, 3 & 4
05	FEB29	The Normal Distribution	SSDS Ch 6	IBS Ex #13, & 18	
06	MAR07	Sampling Distributions	SSDS Ch 7	SSDS Ch6 Ex #1, 3, 7, 11 & 13	Quiz 2 Chapters 5 & 6
07	MAR14	Review Session, Secondary Data Source & Stats Software Examples/Quick Demo		IBS Ex #34 SSDS Ch7 Ex #1, 5, 7 & 13	
08	MAR21	Spring Break Recess			
	MAR28	Estimation	SSDS Ch 8		
09	APR04	Hypothesis Testing 1: One Sample; Two Samples	SSDS Ch 9	IBS Ex #36 & 53 SSDS Ch8 Ex #2 & 3	
11	APR11	Hypothesis Testing 2: Crosstabs & Chi-Square, Associations	SSDS Ch 10 & 11	IBS Ex #38 SSDS Ch9 Ex #5, 7 & 13	Quiz 3 Chapters 7, 8 & 9
12	APR18	Bivariate Regression and Correlation I	SSDS Chs 13	IBS Ex #57 SSDS Ch10 Ex #3 & 11; Ch11 Ex #2	
13	APR25	Hypothesis Testing 3: Analysis of Variance	SSDS Ch 12	IBS Ex #25 & 33 SSDS Ch13 Ex #7	Quiz 4 Chapters 10 & 11, bivariate regression, correlation
14	MAY02	After SOC704 Discussion & Review for the Final Exam	TBA	IBS Ex #50	TBA
15	MAY09 1-3pm	Final Exam			