**Sociology 6280**

**Social Statistics**

**Fall 2019**

**Wednesday 5:00-7:20pm**

Professor: Shirin Montazer, Ph.D Office: 2270 FAB

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Office Hours: Mondays/Wednesdays

**Recommended Course Materials:**

McKee McClendon. *Multiple Regression and Causal Analysis. Waveland Press.* ISBN 1-57766-243-1

*Note: While a textbook is not required for this course, I suggest you buy and read the above text book to get a better understanding of the course material.*

An introductory statistics text will be of assistance in the first couple of weeks. If you do not have one you may get one from the WSU library or obtain one online for a very low price.

Levin, Jack and James Alan Fox.2011. *Elementary Statistics in Social Research: The Essentials 3rd Ed*. Boston, MA: Allyn & Bacon.

Agresti, Alan and Barbara Finlay. 2009. *Statistical Methods for the Social Sciences, 4th edition*. Upper Saddle River, NJ: Prentice Hall.

Frankforth-Nachmias, Chava, and Anna Leon-Guerrero. *Social Statistics for a Diverse Society 5th ed.* Los Angeles, CA: Pine Forge Press.

Roberta Garner. *The Joy of Stats* 2nd ed. University of Toronto Press.

**Calculator.** Students need a calculator capable of doing square roots. Students are required to bring their calculator to each class meeting.

**Software**. Students must obtain SPSS for their personal computers for the semester at no cost from the Wayne State University Software Clearinghouse. You may access a copy from: https://commerce.wayne.edu/clearinghouse/

**Course Description**

This course builds on students’ prior understanding of basic statistics and focuses on multivariate statistical procedures. The course begins with a refresher on univariate statistics, bivariate associations and the basics of statistical inference and reasoning. The majority of this course will focus on the use, interpretation and specification of linear regression models. Topics covered will include: hypothesis testing in multiple regression, model specification, non-linear and multiplicative effects, and logistic regression. The course will focus on how to use computer software (SPSS) to manage data and conduct various analyses and how to present the results of statistical analyses in a professional manner.

**Learning Objectives**

1) Students will demonstrate mastery of basic descriptive statistics, how they are used and how they are presented in academic papers and presentations.

2) Students will demonstrate an understanding of the statistical theories that underlie inferential statistics.

3) Students will be able to use and interpret bivariate statistical results in appropriate ways.

4) Students will demonstrate an understanding of issues of model specification in linear regression.

5) Students will be able to interpret the results of a linear regression analysis.

6) Students will be able to interpret the results of a linear regression; including models that that include dummy variables, non-linear effects, and multiplicative effects.

7) Students will be able to think critically about quantitative analyses and assess the pros and cons of particular analytic decisions.

8) Students will be able to use SPSS to code and manage data, and to estimate descriptive statistics, bivariate associations and regression analyses.

9) Students will be able to present the results of statistical analyses in a professional manner in both oral and written form.

10) Students will be able to link quantitative evidence to substantive research question within sociology.

**General Course Policies**

**Attendance:** Students may miss one class without penalty; afterwards, each missed class will result in a deduction in your grade regardless of the reason for the absence. It is the responsibility of the student to notify the instructor of an absence to get any updates about the course schedule, assignment, and materials. **You cannot make up in-class work for days you are not in class**. **Students who miss three classes may be asked to withdraw from the course.**

**Assignments.** Students are required to complete all assignments by the due date; students who have difficulty with a particular assignment are expected to contact the instructor to discuss these problems **prior to the assignment due date.** Assignments not completed by the due date will not be eligible for full credit and will be assessed at the instructor’s discretion. Student who turn in 2 or more assignments late will not be eligible for a grade of A, and students who turn in 3 or more assignments late may not pass the course. ***It is imperative that students only start an assignment after they have read and understood the relevant course material for that assignment.***

***The purpose of the assignments are to help students apply what was learned in class to a different set of variables and to learn to write “a methods and results section” for a quantitative paper. I suggest students look at scholarly articles published with quantitative data (see examples in suggested readings below) to get a better sense of how they should discuss the methods (i.e, variable creations) and results sections. It is also expected that each assignment include a professional table for the results – again, see other papers. This assignments will be completed in groups of 2 or 3 (depending on size of the class). You may not change your group from assignment to assignment, so pick wisely.***

**Quality is key.** Take pride in your work; do it well enough to claim it as your own. All assignments must be completed in a professional manner (e.g., typed, punctuated, cited) and must adhere to any given formatting guidelines. Also, most assignments will require you to complete statistical analyses using SPSS, for these assignments, **SPSS generated tables cannot be used and assignments using these tables will not be graded.** You are to make your own tables that are similar to those found in academic journal.

**Reading.** Students are required to read all course materials by the time class begins and notify the instructor if they have difficulty completing required reading.

**Office Hours. Office hours** (Mondays) are designed for me to answer specific questions or assist with specific aspects of an assignment. Please come to office hours with questions ready and attempt to complete assignments independently prior to coming to office hours.

**Focus.** Students are expected to be focused on class presentations during class time. Cell phone use in class is strictly prohibited. When we are using computers the computer must be used for class purposes only. Students may not use lab or personal computers for any other purpose during class periods.

**Religious holidays** (from the online Academic Calendar). Because of the extraordinary variety of religious affiliations of the University student body and staff, the Academic Calendar makes no provisions for religious holidays. However, it is University policy to respect the faith and religious obligations of the individual. Students with classes or examinations that conflict with their religious observances are expected to notify their instructors well in advance so that mutually agreeable alternatives may be worked out.

**Student Disabilities Services**. If you have a documented disability that requires accommodations, you will need to register with Student Disability Services (SDS) for coordination of your academic accommodations. The SDS office is located in the Adamany Undergraduate Library. The SDS telephone number is 313-577-1851 or 313-577-3365 (TTD only). Once you have your accommodations in place, I will be glad to meet with you privately during my office hours or at another agreed upon time to discuss your needs. Students who are registered with Student Disability Services and who are eligible for alternate testing accommodations such as extended test time and/or a distraction- reduced environment should present the required test permit to the professor at least one week in advance of the exam. Federal law requires that a student registered with SDS is entitled to the reasonable accommodations specified in the student’s accommodation letter, which might include allowing the student to take the final exam on a day different than the rest of the class.

**Academic Dishonesty -- Plagiarism and Cheating**: Academic misbehavior means any activity that tends to compromise the academic integrity of the institution or subvert the education process. All forms of academic misbehavior are prohibited at Wayne State University, as outlined in the Student Code of Conduct. Students who commit or assist in committing dishonest acts are subject to downgrading (to a failing grade for the test, paper, or other course-related activity in question, or for the entire course) and/or additional sanctions as described in the Student Code of Conduct.

* ***Cheating***: Intentionally using or attempting to use, or intentionally providing or attempting to provide, unauthorized materials, information or assistance in any academic exercise. Examples include: (a) copying from another student’s test paper; (b) allowing another student to copy from a test paper; (c) using unauthorized material such as a "cheat sheet" during an exam.
* ***Fabrication***: Intentional and unauthorized falsification of any information or citation. Examples include: (a) citation of information not taken from the source indicated; (b) listing sources in a bibliography not used in a research paper.
* ***Plagiarism***: To take and use another’s words or ideas as one’s own. Examples include: (a) failure to use appropriate referencing when using the words or ideas of other persons; (b) altering the language, paraphrasing, omitting, rearranging, or forming new combinations of words in an attempt to make the thoughts of another appear as your own.
* ***Unauthorized reuse of work product***: submission for academic credit, without the prior permission of the instructor, of substantial work previously submitted for credit in another course. Example: submitting a paper in a current course that was written for, and submitted in, a previous course. o
* ***Other*** ***forms of academic misbehavior include, but are not limited to***: (a) unauthorized use of resources, or any attempt to limit another student’s access to educational resources, or any attempt to alter equipment so as to lead to an incorrect answer for subsequent users; (b) enlisting the assistance of a substitute in the taking of examinations; (c) violating course rules as defined in the course syllabus or other written information provided to the student; (d) selling, buying or stealing all or part of an un-administered test or answers to the test; (e) changing or altering a grade on a test or other academic grade records.

**Course Drops and Withdrawals:** In the first two weeks of the (full) term, students can drop this class and receive 100% tuition and course fee cancellation. After the end of the second week, there is no tuition or fee cancellation. Students who wish to withdraw from the class can initiate a withdrawal request in Academica. You will receive a transcript notation of WP (passing), WF (failing), or WN (no graded work) at the time of withdrawal. No withdrawals can be initiated after the end of the tenth week. Students enrolled in the 10th week and beyond will receive a grade. Because withdrawing from courses may have negative academic and financial consequences, students considering course withdrawal should make sure they fully understand all the consequences before taking this step. More information on this can be found at: https://wayne.edu/students/register/dropping.

***Student services***:

* The Academic Success Center (Undergraduate Library) assists students with content in select courses and in strengthening study skills. Visit www.success.wayne.edu for schedules and information on study skills workshops, tutoring, and supplemental instruction (primarily in 1000 and 2000 level courses).
* The Writing Center is located on the 2nd floor of the Undergraduate Library and provides individual tutoring consultations free of charge. Visit clasweb.clas.wayne.edu/writing to obtain information on tutors, appointments, and the type of help they can provide.
* Library research assistance Working on a research assignment, paper, or project? Trying to figure out how to collect, organize, and cite your sources? Wayne State librarians provide on campus or online personalized help. Contact them at http:library.wayne.edu/consult.

**Class recordings:** Students need prior written permission from the instructor before recording any portion of this class. If permission is granted, the audio and/or video recording is to be used only for the student’s personal instructional use. Such recordings are not intended for a wider public audience, such as postings to the internet or sharing with others. Students registered with Student Disabilities Services (SDS) who wish to record class materials must present their specific accommodation to the instructor, who will subsequently comply with the request unless there is some specific reason why s/he cannot, such as discussion of confidential or protected information.

**Requirements and Grading:**

The course assignments consist of attendance and participation (10%), six assignments (60%), three quizzes (15%) and a final test (15%). All quizzes and the test are open book. All assignments will be graded on the following scale:

Grades (%): A (90-100) A- (81-89) B+ (77-80) B (72-76) ***B- (68-71) C (60-67) D (50-59)***

***Note: In the Sociology department, a grade of B- or lower is a Fail.***

**“A” level work** consists of cogent, well-articulated, and well-developed written presentation, demonstrating exceptional understanding, preparation, insight, originality, logical argumentation, and factual accuracy. “A” level work is completed on time and according to the guidelines. ***“A” level work is considered excellent.***

**“A-“ level work** consists of cogent, well-articulated, and well-developed written presentation, demonstrating very good understanding, preparation, insight, originality, logical argumentation, and factual accuracy. “A-” level work is completed on time and according to the guidelines***. “A-” level work is considered very good.***

**“B+” level work** consists of well-written work that demonstrates an acceptable understanding, preparation, insight, originality, logical argumentation, and factual accuracy. “***B+” work is acceptable graduate level work***, but only shows a basic grasp of concepts and ideas and with only satisfactory levels of communication.

**“B” level work** consists of work that reflects a minimally adequate understanding, preparation, insight, originality, logical argumentation, and factual accuracy. “***B” level work is considered mediocre and is the*** ***lowest passing grade in the course***.

**“B-” level work** is not adequate in either form or content, thereby not fully meeting the minimum requirements. “B-” level work is not passing at the graduate level. ***A final grade of “B-” will require you to retake this course.***

**“C” level work** shows the barest understanding of the subject or task assigned, is poorly written, and fails to make a coherent argument***. A final grade of “C”*** ***may lead you to be removed from the graduate program.***

**COURSE SCHEDULE- subject to change**

**Week 1 –August 28th**

Introduction to the Course; Basic Statistics Refresher I

**Suggested Reading:** UG stats book about frequencies, levels of measurement central tendency and dispersion

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**Week 2 - September 4th**

Bivariate Associations

**Suggested Reading:** UG stats book about cross-tabs, t-tests, inferential statistics;

**Receive Assignment 1**

­ **Week 3 – September 11th**

Simple Regression

**Suggested Reading:** McClendon Chapters 1 & 2

**Week 4 - September 18th**

Quiz 1 (August 28th to September 4th)

**Week 5 – September 25th**

Multiple Regression

**Suggested Reading:** McClendon Chapter 3+4

**Due: Assignment 1**

**Receive Assignment 2**

**Week 6 - October 2nd**

Using Nominal Independent Variables

**Suggested Reading:** McClendon Chapter 5

Evenson, Ranae J. and Robin W. Simon. 2005. “Clarifying the Relationship between parenthood and Depression.” *Journal of Health and Social Behavior* 46:341-358.

Caputo, Jennifer and Robin W. Simon. 2013. “Physical Limitation and Emotional Well-Being: Gender and Marital Status Variations.” *Journal of Health and Social Behavior* 54:241-257.

**Receive Assignment 3**

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**Week 7 – October 9th**

Non-Linear Relationships

**Suggested Reading**: McClendon Chapter 6

Mirowsky, John and Catherine E. Ross. 1992. “Age and Depression.” *Journal of Health and Social Behavior* 33:187-205.

Mirowsky, John. "The psycho-economics of feeling underpaid: distributive justice and the earnings of husbands and wives." American Journal of Sociology 92, 1987: 1404-1435.

**Receive Assignment 4**

**Due: Assignment 2**

**Week 8 - October 16th**

Quiz 2 (September 11th to October 2nd) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Week 9 – October 23th**

Non-Additive Relationships

**Suggested Reading**: McClendon Chapter 7

Coulton, Claudia and Julian Chow. 1993. “Interaction Effects in Multiple Regression.” Journal of Social Service Research 16, 1-2: 179-199.

Mary Clare Lennon and Sarah Rosenfield. "Women and Mental Health: The Interaction of Job and Family Conditions." Journal of Health and Social Behavior 33: 1992: 316-328.

Evenson, Ranae J. and Robin W. Simon. 2005. “Clarifying the Relationship between parenthood and Depression.” *Journal of Health and Social Behavior* 46:341-358

**Due: Assignment 3**

**Receive Assignment 5 \_\_**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Week 10 – October 30th**

Non-Additive Relationships (if need be) / Mediation

**Suggested Reading:** McClendon Chapter 8 & 9

Montazer, Shirin. 2018. “Disentangling the effects of primary and secondary international migration on psychological distress: the role of mastery.” *Canadian Journal of Public Health* 109:284-293.

**Due: Assignment 4**

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**Week 11 – November 6th**

Logistic Regression

**Suggested Reading:**

Ilsa Lottes, Marina A. Adler, and Alfred DeMaris. 1996. “Using and Interpreting Logistic Regression: a guide for teachers and students.” Teaching Sociology 1996 24,3: 284-298.

DeMaris, Alfred. 1995. “A Tutorial in Logistic Regression.” *Journal of Marriage and the Family* 57: 956-968

**Due: Assignment 5**

**Receive Assignment 6**

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**Week 12 - November 13th**

Quiz 3 (October 2nd to October 30th)

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**Week 13 – November 20th**

**Catch up, review, etc.**

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**Week 14 – November 27th**

**No Class -- Holiday**

**Week 15 – December 4th**

**Due: Assignment 6**

**Final Exam – In class (cumulative)**