**Sociology 6280**

**Social Statistics**

**Winter 2016**

**Political Science Computer Data Lab FAB**

**Wednesdays 5:00-8:20pm**

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

Tel: 313-577-2930 email:shirin.montazer@wayne.edu

Office Hours: by appointment

**Required Course Materials:**

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

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 brief 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. Beyond the mastery of statistical materials, the course will also focus on how to use computer software (SPSS) to manage data and conduct 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.

**Quality is key.** If you are not already of the persuasion that you wouldn’t want to put your name on half-baked & last-minute “efforts,” may you come around soon to that way of thinking. 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** (by appointment on Fridays or Wednesdays) 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.

### Academic Honesty. Students are expected to display academic integrity in all of their work for this course. Academic dishonesty includes cheating, fabrication, and plagiarism. Any student suspected of dishonesty in their work will receive a zero for the assignment in question and referred to the department chair for further disciplinary action. If you have any questions about plagiarism please contact me.

### Honor Code. Students are bound by the Wayne State University honor code which states: Wayne State University holds its students to the highest academic standards. Pride in the University and in oneself requires students to maintain an environment free from any breach of academic honesty. As lifelong representatives of Wayne State, we seek to cultivate honor, integrity, and civility in order to ensure that we earn our degree honestly and that we provide an ethical platform for our continued success

### Registration. Students may drop a class for fifteen-week classes through February 5th.  Classes that are dropped do not appear on the transcript. Beginning the fifth week of class students are no longer allowed to drop but must withdraw from classes. It is the student’s responsibility to request the withdrawal through the registrar’s office. Failure to do so will result in a grade of F. Students must be passing at the time of the request to get a ‘WP.’ After March 26th you cannot withdrawal from the course and will receive a letter grade. Incomplete ‘I’ grades are given in very limited circumstances to students who are passing the course and cannot complete course assignments/test due to extraordinary circumstances. Students that get a grade of incomplete must complete all assignments/test by June 1st 2017.

### Disability. 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 Student Disability Services (SDS) office is located at 1600 David Adamany Undergraduate Library in the Student Academic Success Services department. SDS telephone number is 313-577-1851 or 313-577-3365 (TDD only). Once you have your accommodations in place, I will be glad to meet with you privately during my office hours to discuss your special needs. Student Disability Services’ mission is to assist the university in creating an accessible community where students with disabilities have an equal opportunity to fully participate in their educational experience at Wayne State University.

**Requirements and Grading:**

The course assignments consist of attendance and participation (15%), six homework assignments (65%), and a final test (20%). All assignments will be graded on the following scale:

**“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**

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**Week 1 –January 11th**

Introduction to the Course; Basic Statistics Refresher I

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

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**Week 2 - January 18th**

Basic Stats refresher II

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

**Receive Homework 1**

**Week 3 - January 25th**

Simple Regression and Correlation

**Reading:** McClendon Chapters 1 & 2

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**Week 4 – February 1st**

Multiple Regression

**Reading:** McClendon Chapter 3

**Due: Homework 1**

**Week 5 - February 8th**

Multiple Regression

­**Reading:** McClendon Chapter 3&4

**Receive Homework 2**

**Week 6 - February 15th**

Using Nominal Independent Variables

**Reading:** McClendon Chapter 5

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**Week 7 - February 22nd**

Using nominal Independent Variables / flex day

**Reading:** McClendon Chapter 5

**Due: Homework 2**

**Receive Homework 3**

**Week 8 – March 1st**

Non-Linear Relationships

**Reading**: McClendon Chapter 6

**Receive Homework 4**

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**Week 9 - March 8th**

Non-Additive Relationships

**Reading** : McClendon Chapter 7

**Due: Homework 3**

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**Week 10 - Week of March 13**

**Spring Break**

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**Week 11 - March 22nd**

Non-additive Relationship

**Reading:**  McClendon Chapter 7

**Due: Homework 4**

**Receive Homework 5**

**Week 12 - March 29th**

Assessing Regression Assumptions

**Reading:** McClendon Chapter 4

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**Week 13 - April 5th**

Logistic Regression

**Due: Homework 5**

**Receive Homework 6**

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**Week 14 - April 12th**

**Final test (open book – take home)\***

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**Week 15 - - April 19th**

**Due: Homework 6, by email**

**Flex day**

\*I will upload the test on BB at 12 pm on the day of the test. You will have until 9 pm to complete it on your own at home/office, scan and upload to blackboard. Will discuss further in class.

If any classes prior to the final test are cancelled for any reason and rescheduling of previous lectures becomes necessary, the final test shall be moved to April 19.