**Wayne State University**

**Sociology Department**

**SOC 3220 – Introduction to Social Statistics (formerly SOC 4220)**

# COURSE INFORMATION

Instructor: Randall Wyatt, MA; Ph.D. (randall.wyatt@wayne.edu)

Office: 2256 Faculty Administration Building

Classroom: Online

Class time: 6:30pm – 8:00pm on Tuesdays and Thursdays online

Office hours: By appointment via online application (e.g. Zoom or Webex)

# COURSE DESCRIPTION

Introduction to major concepts in social statistics including level measurement, distributions, probability and bivariate hypothesis testing. Discussion of the role that statistics play in discussions and popular understandings of social issues.

# STUDENT LEARNING OUTCOMES

Students will be able to do the following upon completion of this course:

1. The technical skills involved in retrieving information and data from the Internet and using computers appropriately for data analysis. The student should also be able to do (social) scientific technical writing that accurately conveys data findings and to show an understanding and application of principles of ethical practice as a sociologist.
2. Students will understand the basics of data organization.
3. Students will understand univariate statistical techniques used to describe individual variables and when these techniques are appropriate.
4. Students will be able to compute descriptive statistics by hand and using SPSS.
5. Students will understand statistical inference and how probability theory informs inferential techniques.
6. Students will be able to test univariate hypotheses using inferential statistical techniques.
7. Students will understand basic bivariate statistical techniques and know when these techniques are appropriate.
8. Students will be able to carry out bivariate techniques by hand and using SPSS and interpret results.
9. Students will understand how multivariate statistical techniques can improve upon bivariate statistical techniques.
10. Students will understand how statistics can be used to answer research questions and test hypotheses.

# REQUIRED TEXTS

Frankforth-Nachimas, Chava, and Anna Leon-Guerrero. *Social Statistics for a Diverse Society 8th ed.* Los Angeles, CA: Pine Forge Press.

ISBN: 978-1506347202

**Software:**

This course requires the use of SPSS Statistical Software. The University provides students with a free rental copy of SPSS that you can download and install on your personal computer. Please contact me ASAP if you are having trouble getting access to SPSS.

**Calculator:**

**A calculator that can compute square roots is required and should be brought to each course meeting.** You should be able to get an acceptable calculator for less than $20. If you do not know how to operate your calculator, please ask me for guidance. **You may not use your phone as your course calculator.**

# COURSE FORMAT

The reading requirements are just that; they are **requirements**. Please ensure that you complete them on time, which is prior to class lecture. If you have any trouble keeping up or understanding the material, please let me know as soon as possible. The lectures are intended to supplement the reading assignments, not to substitute for them. In my experiences, students perform better when they read and bring questions to go over in class. Experience suggests that if one student has a question about something they found confounding, then other students may have the same question.

I encourage students to be active participants during lectures to get the most out of this experience. This means responding to questions proposed by the instructor with well-thought out, not vague yes or no answers, responses and inquiries that add value to the class discussion. Each week’s readings should be read prior to the class period that they are scheduled to be covered. (If you notice that I am belaboring the point about reading, it is because I believe it is so critical for your success.)

In my experiences, teaching a statistics course that meets two days a week allows us to get through the material more efficiently than the four-hour long one-week sessions, or the short one hour three day per week sessions that I have been accustomed to. As such, I think this structure gives students a better chance to retain information covered in class. The general format will consist of reading one to two chapters per week that we will cover over the course of the week, which means that you should have your reading complete by the Tuesday class each week. Tuesdays will typically include a lecture on the chapter and the instructor working hands on with students through examples of the week’s material. Because this course is online, we will turn in class assignments on Canvas. I will review those submissions and offer comments to help with student’s progression with the material.

# METHODS OF EVALUATION

Final grades in this course will be determined through assessment of your class participation, eight homework assignments, one presentation, and one midterm exam and final exam each. More detailed information on these assignments follow.

**Class participation:** Participation will be assessed via completion of class assignments. We will work on examples during lectures together. Activities will be assigned that reflect these examples for you to turn in online that day of class. You will receive points for completion, not for accuracy. Class participation will be worth a total of 50 points. You **must** complete the assignments on time to receive the points.

**Homework Assignments:** There will be eight homework assignments worth 25 points each for a total of 200 points. These assignments will measure your ability to compute the various statistical techniques that we will cover by hand and via SPSS. They will also require you to **interpret** your findings.

**Short Presentation:** Students will complete a small independent data analysis project using publicly available statistics. The project will be explained in detail in class and is worth 50 points.

**\*\*\*Note:** The presentation assignment tests the student’s ability to understand the basics of data organization and the logic of using numbers to discuss social phenomena (see learning outcomes 2 and 10). It can be argued that developing this skill is the most essential goal of a basic statistics course such as this one.

**Quizzes:** There will be five pop quizzes administered over the course of the semester. As you probably deduced from the use of the word pop, the dates for these quizzes are completely spontaneous and are not reflected on the schedule below. However, students will be notified a week in advance of what material the upcoming quiz will cover. It will be imperative that you stay up to date on your reading and contact the instructor immediately if you are having trouble with the material. Each quiz is worth 25 points. Students will have the opportunity to drop the score of their lowest quiz. The total point values for quizzes is 100 points.

**Exams:** There will be 2 exams worth a total of 200 points. Given the nature of the subjects, the exams will be cumulative in nature.

## Grade Chart:

Assignment/Evaluation Possible Points Your points

Class Participation 50

HW 1 25

HW 2 25

HW 3 25

HW 4 25

HW 5 25

HW 6 25

HW 7 25

HW 8 25

Quizzes 100

Presentation 50

Exam 1 100

Exam 2 100

TOTAL 600

**Grades:** A (600-552) A- (551-540) B+ (539-516) B (515-492) B- (491-480) C+ (490-456) C (455-432) C-(431-420) D (419-360) F (<360)

# GENERAL COURSE POLICIES

**Homework Assignments.** All homework assignment for this course are required to be completed by the due date; students who have difficulty with a particular assignment, or other material covered during the course of the semester, are expected to contact the instructor to discuss these problems prior to the assignment due date**.** **Assignments not completed by the due date for any reason will not be eligible for full credit and will be evaluated at the instructor’s discretion.**

**Quality is key.** If you are not already of the persuasion that you would not 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.

**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. Please ask questions if you are confused by the course text.

Office Hours.Office hours are designed for me to answer specific questions or assist with specific aspects of an assignment. Please come to office hours (online only) with questions ready. If you need to schedule office hours, inform the instructor so we can set up a personal Zoom meeting. Remember that office hours are purely for support or assistance with grasping concepts for which the student is having difficulty. They are meant to supplement classrooms lectures, not to replace or restate entire lectures.

**Final Grades.** Final grades submitted by the instructor are **final.** If you believe that there has been a clerical error or other mistake you may inquire for an accounting of your grade. However, grades are based solely on your scores on course assignments and **will not be arbitrarily adjusted** at the end of the term. Students who aspire for a specific grade should ask me early in the semester about whether they are on track and work proactively to achieve their desired goals.

**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 academic honesty, please contact me.

**Honor Code:** Students are bound by the Wayne State University honor code that states: “Students should exemplify honesty, honor and a respect for the truth in all of their activities. Students should build and enhance their communities. Students should show positive regard for others, for property and for the community. Students should be given and accept a high level of responsibility to self, to others and to the community.”

Registration: Students may drop this class through May 17, 2020.  Classes that are dropped by this date do not appear on the transcript and students receive a 100 percent tuition reimbursement. Beginning the third week of class students are no longer allowed to drop but may 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 July 12, 2020, you cannot withdraw from the course and you will receive a letter grade. Incomplete ‘I’ grades are given in very limited circumstances to students who are passing the course and cannot complete final assignments due to **extraordinary** circumstances.

**Disability:** If you have a documented disability that requires accommodations, you need to register with Student Disability Services (SDS) for coordination of your academic accommodations. Student Disability Services’ office is located at 1600 David Adamany Undergraduate Library in the Student Academic Success Services department, room 103A. Their telephone number is 313-577-1851 or 313-577-3365 (TTY 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. Disability Support 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.

**Class Recordings:** Online lectures will be recorded to service students who may not be able to attend these meetings due to other engagements. These will be posted on Canvas for your viewing.

**Final note:** As a final aside, students are expected to give proper respect to one another and the instructor. Because this class deals with social statistics, we may cover some sensitive subjects regarding race, gender, religion, sexuality, etc. Please refrain from using anecdotes and focus on the broader analysis of the data. We all come from various backgrounds and perspectives. Take note of this reality and be mindful of comments that may offend people who may be different from in some regard. We must all check our privilege at the door (our home doors since these class is online)!

### COURSE SCHEDULE- subject to change

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| **Weeks** | **Readings** | **Objectives/Activities** |
| 5/5 – 5/7 | Chapters 1 and 2 | * Cover Syllabus
* Frequency Distributions
* Rates, Proportion, and percentages
* Homework 1 assigned
 |
| 5/12 – 5/14 | Chapters 3 and 4 | * Measures of Central Tendency
* Measures of Dispersion
* Homework 1 due 5/14
* Homework 2 assigned
 |
| 5/19 – 5/21 | Chapters 5 and 6 | * Normal Distribution
* Probabilities and Odds
* Homework 2 due 5/21
* Homework 3 assigned
 |
| 5/26 – 5/28 | Chapter 7 | * Estimation
* Samples
* Lab
* Homework 3 due
 |
| 6/02 – 6/04 | Chapter 8 | * Estimation continued
* Hypothesis testing intro
* T tests
* Homework 4 assigned
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| 6/09 – 6/11 | Review of material up to this point | * Lab
* Midterm exam prep
* Homework 4 due
 |
| 6/16 – 6/18 | Chapter 11 | * Analysis of Variance (ANOVA)
* Lab
* Homework 5 assigned
 |
| 6/23 – 6/25 | Chapter 9 and 10 | * Crosstabs
* Chi Square
* Lab
* Homework 5 due
* Homework 6 assigned
 |
| 6/30 – 7/02 | Chapter 12 | * Correlation
* Regression
* Homework 6 due 7/02
* Homework 7 assigned
 |
| 7/07 – 7/09 | No reading | * Multiple regression
* Lab
* Homework 7 due
* Homework 8 assigned
 |
| 7/14 – 7/16 | Presentation: first wave | * Student presentations
* Homework 8 due
 |
| 7/21 – 7/23 | Presentation: second wave and review of material since midterm | * Student presentations
* Final exam review
 |
| 7/28 – 7/30 | Final exam week | * Final exam 7/30
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