

UNIVERSITY OF NORTH TEXAS
Department of Sociology
SOC 3280: Quantitative Methods of Social Research
GAB, Rm 550A, 6:00pm-8:50

Dale E. Yeatts, Ph.D.

Professor

Chilton Hall, 392 Sociology Suite

Office Hours: Tues/Thurs, 12:00-2:00
and by appointment

Phone: 940-565-2238

E-mail: yeatts@unt.edu

Fax: 940-369-7035

Web Page: www.yeatts.us

I. Learning Objectives:

- A. To obtain a basic understanding of the value of using quantitative methods to better understand the world we live in
- B. To accurately interpret statistical tables
- C. To differentiate between levels of measurement and to identify appropriate statistics for each level of measurement
- D. To understand measures of central tendency
- E. To recognize independent and dependent variables and to measure the effect that one has on the other
- F. To estimate a population parameter using a sample
- G. To test an hypothesis

II. Learning components

- A. Readings: To help meet the objectives, the following book is required reading:

Frankfort-Nachmias, Chava and Leon-Guerrero Anna (2011). Social Statistics for a Diverse Society (7th Edition). Pine Forge Press: Thousand Oaks, CA. (6th edition could work)

This book can be purchased with or without SPSS (statistical software package for the social sciences). We will be using SPSS throughout the semester. The UNT computer labs have SPSS on the UNT computers. However, if you want to do your homework assignments at home, you will

need to purchase the book with the SPSS software and install it on your home computer.

- B. Class time: will be focused on the objectives through lectures, class discussions, and working through problems in class using IBM-SPSS.
- C. Homework Assignments: Homework assignments are worth 20% of the final grade so be sure to do all five homework assignments. **No homework assignments will be accepted over the internet.** Homework assignments, not turned in at the start of class on the assignment's due date, will be considered late. The instructor has the discretion to decide if a homework assignment will be accepted late. If granted, it must be taken within one week of the original due date. Students, without exceptional circumstances, will be deducted a letter grade. Homework must be typed (except for formulas and tables which can be hand written) and turned in at the beginning of the class period when they are due. Homework assignments can greatly enhance a student's ability to understand statistical concepts and will help greatly when taking tests.
- D. Assistance outside of class: I will be available during my office hours and by appointment (see above). I am happy to work individually with students who are giving a lot of their time and effort to the course and will be happy to assist you in understanding the material. However, if you miss class often or are clearly not putting much effort into understanding the material (e.g., haven't done the readings, haven't done the homework assignments), I will not provide a private makeup lecture. You may also obtain help from the Teaching Assistant. Further, here is a website that will give you practice quizzes, study questions, flash cards, exercises, and data sets: <http://www.pineforge.com/frankfort-nachmiasstudy5/>. Also, the Business School provides a statistics lab in the Business Learning Building room 131, open most weekdays from 9am until 10pm.

III. Course Policies

- A. Class Attendance: regular and punctual class attendance is expected. It will be difficult to master all the material if class is missed (particularly

since later lessons are based on earlier ones so, if you miss class, it will affect your performance in the future). Further, **if you miss class you may miss receiving a homework assignment**. Students who miss no classes will likely receive several extra points added to her/his final grade. On the other hand, students who routinely come to class late or leave early will have points subtracted from her/his final grade. Students who miss more than three classes will be deducted one letter grade for each additional class missed regardless of the reason the fourth (and additional) class was missed. Therefore, try to attend all classes. Please do not miss three classes and then discover that you are too sick to attend class because you will have one letter grade deducted from your final grade regardless.

- B. Extra Credit: Students will be able to obtain extra credit points during most of our classes. Extra credit points will be added to the student's next test score. For example, students may be given a problem to work out during class and then be asked to turn it in before the end of class. If the student has clearly attempted to answer the problem, the student will get two extra points added to her/his next test score. Students who are absent, or come to class late, or leave class early will not be eligible for these extra points.
- C. Academic integrity: as the student guidebook points out, academic integrity is required. Plagiarism and cheating will result in failure and a report to the Dean.
- D. Special Needs: appropriate adjustments and auxiliary aid are available for persons with disabilities. See Professor Yeatts and/or call 817-565-2456 (TDD access 1-800-735-2989).
- E. Cell Phones: Cell phones **must** be turned off and put away during tests. Texting or otherwise using a cell phone during class, other than on a rare occasion, will negatively affect a student's final grade.
- F. Computers: all monitors should be lowered at the beginning of class. Laptops will only be permitted if the student is sitting in the front row.

G. Grading: final grades will be based on the following:

Four (4) tests will be given with each worth 15% of your final grade (homework assignments and a paper make up the remaining 40%). Grades will be posted on Professor Yeatts' web page. The format is expected to include short answers, statistical problems, and possibly multiple choice and matching. The instructor has the discretion to decide if a makeup exam will be granted. If granted, it must be taken within one week of the original test date—students, without exceptional circumstances, will be deducted a letter grade. If you arrive significantly late for an exam, your exam score will be penalized. You will need a calculator with a square root key (but you may not use a graphing calculator). **You may not use your cell phone or a communication device as a calculator during an exam.**

	<u>Points</u>
<u>Test 1-4</u> (all tests combined)	60%
Test 1 (February 17)	
Test 2 (March 16)	
Test 3 (April 6)	
Test 4 will be given on exam day (May 11 th , 6:00)	
<u>Paper Assignment</u> (April 27)	20%
<u>Homework Assignments</u> (all assignments combined)	20%
(February 3, February 12, March 4, April 1, May 4)	

Class Participation: Those who routinely contribute questions and comments/ideas may receive extra points added to their final grade if their final grade is close to the next higher grade. For example, an 88 would be raised to a 90. Similarly, students who miss none or only one class will most likely receive extra points on their final grade if needed to reach the next higher letter grade.

IV. Topics to be Covered/Reading Assignments:

All chapter assignments listed below refer to the required text book.

Week 1:

Jan. 20: Introduction to the course
Chapter 1: The What and the Why of Statistics

Week 2:

Jan. 27: Receive homework #1 assignment.
Chapter 2: Organization of information: Frequency distributions
Chapter 4: Measures of central tendency (beginning of chapter).
(Chapter 4 will be covered before Chapter 3, please read both chapters 2 and 3 and the beginning of chapter 4 for this week)

Homework #1 due on February 3

Week 3:

Feb. 3: Receive Homework #2 assignment
Chapter 4: Measures of central tendency (continued)
Chapter 3: Graphic Presentation
Chapter 5: Measures of Variability (beginning). Students will NOT be responsible for pages 138 - 150. However, the class material will cover these topics (IQV, range, IQR, box plot) and students will be responsible for the material presented in class.

Week 4:

Feb. 10: Chapter 5: Measures of Variability (continued)
Use of SPSS to examine Measures of central tendency and Measures of variability;
Review homework #1 and chapters 1 - 5

Homework #2 due on February 12; no later than 5:00; Yeatts' office, 392 Chilton Hall (On Feb. 15 I will leave your graded homework in a box at the sociology office so you can pick it up and review it before test #1)

*****Feb. 17 (Week 5): Test 1 covering chapters 1-5 and class material*** (first half of class)**

Week 5:

Feb. 17: Chapter 6: The Normal Distribution (second half of class). Students will not be responsible for pages 182 - 205. However, material from these pages will be covered in class and students will be responsible for all class material covered.

Week 6:

Feb. 24: Chapter 6 (continued).
Receive homework #3 assignment
Review Test #1
Chapter 7: Sampling and Sampling Distribution. Students will not be responsible for pages 216 - 236. However, material from these pages will be covered in class and students will be responsible for all class material covered.

Week 7:

March 2: Chapter 7 (continued)
Review Chapters 6 - 7

Homework #3 due on March 4; no later than 5:00; Yeatts' office, 392 Chilton Hall. (On March 7 I will leave your graded homework in a box at the sociology office. However, the office may be closed during spring break. If you would like to pick it up during spring break, send me an email and we can arrange a day/time for you to pick it up)

Spring Break (March 7 - 11)

*****March 16 (Week 8): Test 2 covering chapters 6 - 7 *****
(first half of class)

Week 8:

March 16: Chapter 8: Estimation (second half of class)

Week 9:

March 23: Chapter 8 (continued)
Receive homework #4 assignment
Review Test #2
Chapter 9: Testing Hypotheses

Week 10:

March 30: Chapter 9 continued
Review chapters 8 and 9

**Homework #4 due on April 1; no later than 5:00; Yeatts' office,
392 Chilton Hall (On April 4 I will leave your graded homework in a box at
the sociology office so you can pick it up and review it before test #3)**

****April 6 (Week 11): Test 3 covering chapters 8 - 9 and class material**
(first half of class)**

Week 11:

April 6: Chapter 10: Bivariate Tables (second half of class)

Week 12:

April 13: Chapter 10 (continued)
Review Test #3
Chapter 11: The Chi-Square Test and Measures of Association

Week 13:

April 20: Chapter 11 (continued)
Chapter 12: Analysis of Variance

****Research Paper due on April 27****

Week 14:

April 27: Chapter 12 (continued)
Receive homework #5 assignment
(we may review some of Chapter 13: Regression and Correlation; however, you will not be responsible for reading this chapter. You will be responsible for all material covered in class.)

Homework #5 due on May 4 (On May 6, I will leave your graded homework in a box at the sociology office so you can pick it up and review it before test #4)

May 4: Chapters 10-12 and class material

****May 11 (during exam week): Test 4 covering chapters 10-12 and class material****

Research Paper (20% of final grade)

The required paper is designed to prepare the sociology major for her/his capstone project. Each student will be responsible for writing a brief 3-5 page paper describing the data presented in at least three tables created by the student. Each table will use data from the Yeatts-Cready Nurse Aide study (found on Yeatts' webpage). The data include questionnaire responses from 410 nurse aides (NAs). The questionnaire asks the NAs about their job. Each of the three tables will have the same dependent variable that has been selected by the student. The Yeatts-Cready data set has a variety of possible dependent variables related to the workplace such as job satisfaction, job commitment, empowerment, absenteeism, burnout, emotional exhaustion, competence, satisfaction with pay, etc. Click on "Nurse Aide Questions/Variables Measured" on the Yeatts' webpage to see the many variables that are available to analyze. The questionnaire with all the questions is also available on the webpage (click on "Questionnaire for Nurse Aides"). Each table

will have a different independent variable believed to be associated with the dependent variable. For example, the student may choose "job satisfaction" as the dependent variable with one table showing the relationship between job satisfaction and pay, another table showing the relationship between job satisfaction and emotional exhaustion and a third table showing the relationship between job satisfaction and management support. Each table should be typed and formatted in a professional manner, e.g., title, source of data, clear presentation of variables as well as the values for the variables. SPSS can create tables. However, these are generally unprofessional and should not be used in your paper.

Below is a suggested outline to help guide you in preparing and writing the paper. You may want to use headings in your paper such as "Introduction", "Theory", "Data Analysis" and "Conclusion and Implications".

Paragraph 1	Introduction	State the issue that you will be examining (your dependent variable). For example, if "job satisfaction" is your topic, begin the introduction by noting its importance in the work place. Explain why this is an important area to examine. Be sure to gain the readers interest in your topic/dependent variable.
Paragraphs 2-3	Theory	Explain that there are a variety of factors believed to affect your topic (for example, job satisfaction). Provide a brief discussion of each factor (i.e., each independent variable) you intend to examine and why it is reasonable to expect that the factor is related to your topic/dependent variable. As part of your discussion, you can cite and briefly review one or more journal articles that have shown one or more of your independent variables to be related to your topic. You should end this section by presenting a hypothesis for each of your independent variables. For example, "Job satisfaction is positively associated with management support." (that is, as a worker's feeling of management support goes up, the worker's feeling of job satisfaction goes up).

Paragraphs 4-7	Data Analysis	Review each table that you have created (typically there is a separate table for each independent variable showing the relationship between it and the dependent variable). Provide an overview of what the information in the table tells us. Does the data show that your dependent variable is associated with the independent variable? That is, are your hypotheses supported by the data? Be sure to note what statistic is being used to determine whether there is an association between the dependent and independent variables. Do the findings support previous studies, assuming you have presented a few studies that also examined the same relationship you are examining. You might have a separate paragraph discussing each table/independent variable.
Paragraph 8	Conclusion and Implications	Provide a brief conclusion that (1) summarizes how each independent variable is associated with the dependent variable and (2) considers the implications of the data for nurse aides in nursing homes as well as for workers more generally.

Formatting Requirements for your paper:

- The paper must be at least 3 pages and no more than 5 pages (not including bibliography and tables).
- The paper must be printed and turned in on the day it is due. An emailed paper will not be accepted.
- The paper must be written in 12 point Times New Roman font.
- The paper must be double spaced.
- All page margins must be 1 inch.
- Any articles, books, etc. that are used must be cited appropriately, using APA guidelines. A reference list (bibliography) should also be provided at the end of the paper to show the resources used/cited. If you are not familiar with APA format, seek assistance from the instructor or the free University writing lab (<http://www.unt.edu/writinglab/>).
- If you have any questions send your professor an email: yeatts@unt.edu.