

THE UNIVERSITY OF TEXAS AT AUSTIN
SCHOOL OF SOCIAL WORK
SOCIAL WORK STATISTICS

Course #: SW 318 (Social Work Statistics)	Unique #: 60340
Semester: Fall 2015	Instructor: Ahmed Whitt, PhD, MSW
Meeting Day/Time: Tues. & Thurs, 3:30-5pm	Contact: ahmedwhitt@utexas.edu
Class Location: SW Room 1.212	Office Hours: Weds. 2-3pm or by Appt. [3.106C]

Quantitative Reasoning *This course carries the Quantitative Reasoning flag. Quantitative Reasoning courses are designed to equip you with skills that are necessary for understanding the types of quantitative arguments you will regularly encounter in your adult and professional life. You should therefore expect a substantial portion of your grade to come from your use of quantitative skills to analyze real-world problems.*

Course Description

This course is one of the two courses in research for undergraduate social work majors. Completion of the liberal arts math requirement is a prerequisite for this course. This course provides a basic introduction to the conceptual and quantitative tools used to describe and interpret data in the conduct of social work practice and research. Students will learn how to select, calculate, and interpret appropriate statistics applicable to common data analysis situations related to direct practice, administration and planning, and policy making. The course provides students with the opportunity to acquire personal computer skills in R statistical software to calculate statistics and present results. Students are required to complete SW318 prior to entering the major. Students majoring in social work must earn a grade of C or better in this course.

Course Objectives

By the end of the course, the students should be able to:

1. Explain the logic of the research process and its relationship to social work knowledge and practice;
2. Explain, calculate, and interpret descriptive statistics including: basic terminology, scales, notations, frequency distributions, measures of central tendency, measures of dispersion, and the normal distribution;
3. Read and analyze basic charts and graphs, contingency tables, and R output results;
4. Explain the logic of hypothesis testing in inferential statistics;
5. Explain, calculate, and interpret inferential statistics including t-tests, chi-square, ANOVA, correlation, and regression;
6. Identify and apply the correct statistical technique to the research question;
7. Use computer technology to compute descriptive and inferential statistics; and
8. State several examples of how statistics are used as a tool in the “real world” by social service agencies to analyze client outcomes.

Teaching Methods

The primary means of instruction will be informal lectures (i.e., students are encouraged to ask questions and make comments during lectures), class discussions, and in-class exercises using computers and other materials. Students will be expected to have completed the assigned reading

before class, to actively participate in class, and to collaborate with one another. SPSS and R statistical software programs are the primary statistics software packages to be used in class and in assignments.

Required and Recommended Texts and Materials

Required Text

Linneman, T. J. (2014). *Social Statistics: Managing Data, Conducting Analyses, Presenting Results. Second Edition*. Routledge.

Software

R: We will use R to do the statistical calculations needed for this course. R is free, open-source software and two “graphical user interfaces” (GUIs) are available for it, R Commander and R Studio. You will need to install both R and R Commander on your computer.

To download R: <http://cran.r-project.org/>

To download R Commander: <http://socserv.mcmaster.ca/jfox/Misc/Rcmdr/>

Online tutorials

We will use several online tutorials to guide use of R and R Commander.

Installing R for Mac OS [Note you only need to download “R-3.1.1.pkg” or click on “latest version” link. So you only need the first 1.5 minutes of this video]:

<http://www.youtube.com/watch?v=ICGkG7Gg6j0>

Installing R for Windows [Note: You only need to download “R-3.1.1.pkg” or click on “latest version” link. Also, don’t worry about updating packages or installing new packages. So just watch the first 1.5 minutes or so.]: <http://www.youtube.com/watch?v=A56PD8BSS0A>

Computer Requirements

Students will need a laptop computer to complete homework assignments, exams, and in-class exercises. If you do not have a laptop, you may borrow one from the School of Social Work’s Learning Resource Center (LRC). Computers are available from the LRC desk on a “first come / first served” basis, so plan ahead. **In order to use the computers in campus computer labs you need your UT EID and password.** Details about UT EID accounts, including how to obtain one are available at the web address: https://utdirect.utexas.edu/nlogon/eid_suite/general/.

If borrowing a computer you will need to make these arrangements before class begins.

Canvas

Canvas will be used extensively in this course. On Canvas, you will find most materials needed for this course. Use Canvas to find:

- Homework assignment/labs to be submitted online;
- Datasets to be used in assignments and exams;
- Course materials (syllabus, course presentations, announcements);
- Access to e-mail addresses to ask questions about assignments.

While the University has invested significant resources in support of Canvas, there are still periodic outages and slow-downs. **If you wait until the last minute to complete assignments on Canvas, you may encounter difficulties.**

Grading and Course Requirements

Accumulated points and grading scale
94.0 and above A

90.0 to 93.999 A-
87.0 to 89.999 B+
84.0 to 86.999 B
80.0 to 83.999 B-
77.0 to 79.999 C+
74.0 to 76.999 C
70.0 to 73.999 C-
67.0 to 69.999 D+
64.0 to 66.999 D
60.0 to 63.999 D-
Below 60.0 F

Grades will NOT be rounded up.

Course requirements and grade assignment: The final grade will be computed from grades on in-class/homework labs (50%), a final exam (35%), and students' attendance, preparation, and participation in class (15%). Excessive absences will result in grade reductions per the policy described below.

Class attendance, preparation, and participation (15% of grade)

It is important that social work practitioners take responsibility for their own continued learning and act in a professional manner. Thus, students are expected to attend all classes, to complete assigned readings before the class meeting for which they are assigned, to compile questions regarding the material for class discussion, and to actively participate throughout class meetings.

Further, students are expected to attend all classes and to arrive punctually. It is very important due to the cumulative nature of this course. Coming late and/or leaving early by more than 10 minutes will be considered a "missed" class. However, the instructor understands things can happen. Therefore, students may have up to two "misses" in the event of unexpected emergencies, medical appointments, university sanctioned events, or religious holidays. If you should miss a class, you are required to email the instructor before that class period to explain the reason. Missing more than two classes will result in a 2% per missed class deduction from the student's final grade. So students are advised to save misses for emergencies.

Make-ups are permitted only for documented absences owing to observance of a religious holiday or University-sponsored activity at which your attendance is mandatory. A University sponsored event or activity is one that the University endorses by supporting it financially, or by sending students to participate in it as official representatives of the University. You must notify your instructor in writing during the first week of class of planned absences due to a religious holiday or University-sponsored activity, such as intercollegiate sports or artistic performances. Notification must include proper authorization from an appropriate administrator, such as a dean, department chair, or director of an administrative unit, or their delegate.

Lab assignments (50% of grade)

There are 4 scheduled lab assignments. Labs #1-3 will be initiated in class and the submitted on Canvas (10% each). Lab #4 will be submitted on Canvas and presented in class (20%). The purposes of the lab assignments are to allow you to review conceptual content and to provide you with opportunities to practicing solving statistical problems using the computer and R.

Failure to submit homework during the assigned period will result in a "zero" as your score for the assignment. Students are expected to complete their homework assignments individually.

Exam (35% of grade)

There will be one exam that will cover all material assigned for and discussed in class. Questions on the tests will include conceptual questions from the text and lectures as well as statistical problems to solve using the computer and R.

Exams are to be taken at the scheduled time. Only in the case of emergencies and then only with instructor approval will make-up exam be offered. Please notify the instructor of the situation as soon as it is reasonably possible. The date and time for the makeup exam will be scheduled at a time that is mutually convenient to the student and the instructor.

University and School Notices and Policies

The University of Texas Honor Code: The core values of The University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility. Each member of the university is expected to uphold these values through integrity, honesty, trust, fairness, and respect toward peers and community.

Professional Conduct in Class: The professor expects students to act like professionals in class. This means students should arrive on time for class, be prepared to participate in the class discussion, and show respect for one another's opinions. We will not, nor should we, always agree with one another. In this environment we should be exposed to diverse ideas and opinions, and sometime we will not agree with the ideas expressed by others. However, the professor does require that students engage one another with respect and professionalism.

Policy on Scholastic Dishonesty: Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. Since such dishonesty harms the individual, all students, and the integrity of the University, policies on scholastic dishonesty will be strictly enforced. For further information, the student may refer to the Web Site of the Student Judicial Services, Office of the Dean of Students (<http://www.utexas.edu/depts/dos/sjs/>).

Documented Disability Statement: Any student who requires special accommodations must obtain a letter that documents the disability from the Services for Students with Disabilities area of the Division of Diversity and Community Engagement (471-6259 voice or 471-4641 TTY for users who are deaf or hard of hearing). Present the letter to the professor at the beginning of the semester so that needed accommodations can be discussed. The student should remind the professor of any testing accommodations no later than five business days before an exam. For more information, visit <http://www.utexas.edu/diversity/ddce/ssd/>.

Religious Holidays: By UT Austin policy, students must notify the professor of a pending absence at least fourteen days prior to the date of observance of a religious holy day. If the student must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, the professor will give the student an opportunity to complete the missed work within a reasonable time after the absence.

Use of E-Mail for Official Correspondence to Students: Email is recognized as an official mode of university correspondence; therefore, students are responsible for reading their email for university and course- related information and announcements. Students are responsible for keeping the university informed about changes to their e-mail address. Students should check their e-mail regularly and frequently to stay current with university-related communications, some of which may

be time-sensitive. Students can find UT Austin's policies and instructions for updating their e-mail address at <http://www.utexas.edu/its/policies/emailnotify.php>.

Safety: As part of professional social work education, students may have assignments that involve working in agency settings and/or the community. As such, these assignments may present some risks. Sound choices and caution may lower risks inherent to the profession. It is the student's responsibility to be aware of and adhere to policies and practices related to agency and/or community safety. Students should notify the professor regarding any safety concerns.

Behavior Concerns Advice Line (BCAL): If students are worried about someone who is acting differently, they may use the Behavior Concerns Advice Line to discuss by phone their concerns about another individual's behavior. This service is provided through a partnership among the Office of the Dean of Students, the Counseling and Mental Health Center (CMHC), the Employee Assistance Program (EAP), and The University of Texas Police Department (UTPD). Call 512-232-5050 or visit <http://www.utexas.edu/safety/bcal>.

Emergency Evacuation Policy: Occupants of buildings on the UT Austin campus are required to evacuate and assemble outside when a fire alarm is activated or an announcement is made. Please be aware of the following policies regarding evacuation:

- Familiarize yourself with all exit doors of the classroom and the building. Remember that the nearest exit door may not be the one you used when you entered the building.
- If you require assistance to evacuate, inform the professor in writing during the first week of class.
- In the event of an evacuation, follow the professor's instructions.
- Do not re-enter a building unless you're given instructions by the Austin Fire Department, the UT Austin Police Department, or the Fire Prevention Services office.

Feedback on Learning: During this course the professor will ask students to provide feedback on their learning in informal as well as formal ways. It is very important for the professor to know the students' reactions to what is taking place in class, so students are encouraged to inform the professor on how her teaching strategies are helping or hindering student learning, ensuring that together the professor and students can create an environment effective for teaching and learning.

Course Schedule (subject to change)

Date	Day	Content	Reading
29-Aug	Th	Course Introduction	
1-Sep	T	Designing Research	
3-Sep	Th	Practice Lab - Statistics Everywhere	TBD
8-Sep	T	Collecting Data	Chapter 1, "Life in a Data Laden Age..."
10-Sep	Th	Displaying Data	Chapter 2, "The Art Visual Storytelling..."
15-Sep	T	Descriptive Statistics	Chapter 3, "Summarizing Center..."
17-Sep	Th	Practice Lab - Software Introduction	
22-Sep	T	Chi-Square	Chapter 4, "Using Sample Crosstabs..."
24-Sep	Th	Lab #1	
29-Sep	T	Distributions and the Normal Curve	TBD
1-Oct	Th	Confidence Intervals	Chapter 5, "Using a Sample Mean..."
6-Oct	T	T-Tests & ANOVA	Chapter 6, "Using Multiple Sample Means..."
8-Oct	Th	T-Tests & ANOVA (continued)	
13-Oct	T	Lab #2	
15-Oct	Th	Bivariate Correlation	Chapter 7, "Give Me One Good Reason...:"
20-Oct	T	Inference & Regression	Chapter 8, "Using Sample Slopes..."
22-Oct	Th	Inference & Regression (continued)	Chapter 9, "It's All Relative..."
27-Oct	T	Lab #3	
29-Oct	Th	Logistic Regression	Chapter 13, "Explaining Dichotomous Outcomes..."
3-Nov	T	Interactive Effects	Chapter 12, "Different Slopes..."
5-Nov	Th	Research Presentation	
10-Nov	T	Exam Review	
12-Nov	Th	Exam #1	
17-Nov	T	Lab #4 Introduction	
19-Nov	Th	Advanced Topics in Regression	Chapter 14, "Visualizing Causal Stories..."
24-Nov	T	Lab #4 Workshop	
26-Nov	Th	NO CLASS	
1-Dec	T	Lab #4 Presentations	
3-Dec	Th	Lab #4 Presentations	