**Course Number:** SW 318     **Instructor:** Tres Hinds, PhD, MS
**Unique Number:** 59670    **E-mail:** **Josephine.t.hinds@utexas.edu**
**Semester:** Spring 2022     **Office:** Zoom link below
**Meeting Time/Place:** T Th 3:30-5:00 pm  **Office Hours:** T 1:00-2:30 pm, Zoom link
      Zoom and SSW 1.212  (or by appointment)

## SOCIAL WORK STATISTICS

## I.  STANDARDIZED 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. 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 practice sequence. Students majoring in social work must earn a grade of C or better in this course.

**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.

## II.  STANDARDIZED COURSE OBJECTIVES

Upon completion of this course, the students should be able to:
1. Understand and 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, graphs, and contingency tables;
4. Explain the logic of hypothesis testing in inferential statistics;
5. Explain, calculate, and interpret inferential statistics including t-tests, ANOVA, correlation, regression, and chi-square;
6. Identify and apply the correct statistical technique to the research question;
7. Understand that statistics can be value-neutral, but can be used to support discriminatory and prejudicial value positions contrary to the values of social work,

especially against marginalized populations (e.g., BIPOC, members of the LGBTQIA+ community, women, people with disabilities, etc.);

8. Use computer technology to compute descriptive and inferential statistics; and
9. State several examples of how statistics are used as a tool in the "real world" by social service agencies to analyze client outcomes.

## III.    TEACHING METHODS

Welcome to Social Work Statistics! I hope that this course will give you practical tools to use statistics in promoting social justice as a student and practitioner. Learning statistics can be tough, especially amidst an ongoing global pandemic. Please let me know how I can help with special accommodations or class adjustments due to emergencies as they arise. And feel free to reach out with questions. My office door (and online zoom calendar) are open during office hours to meet with you regarding assignments and class material.

The primary means of instruction are in-class lectures, class and small-group discussions, and in-class exercises using computers and other materials. Students are expected to have completed the assigned reading prior to class, to actively participate and ask clarifying questions, and to collaborate with one another. R software is the primary statistical analysis package to be used in class and on assignments. For successful completion of the course, students are expected to complete assigned readings and homework assigned for each week. Class attendance and participation are also required throughout the semester.

## IV.    REQUIRED TEXT AND MATERIALS

**Required Text**
Frankfort-Nachmias, C., & Leon-Guerrero, A. (2020). *Social statistics for a diverse society (9$^{th}$ Ed)*. Thousand Oaks, CA: Sage Publications. **Older versions of this textbook are acceptable** (i.e., the 2018/8$^{th}$ edition).

**Software**
R is free software for statistical computing and graphics. We will use R  for the entire semester. **You need to install both R and R Studio on your computer**.

To download both, follow the instructions here: https://youtu.be/9L021PaxLfQ

Additional materials & resources for R will be available on Canvas.

**Computer Requirements**
During the semester, students will need a laptop computer to complete homework assignments, exams, and lecture 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 and make arrangements before class begins. Your UT EID and password are required in the process of checking out a laptop.

**Canvas**
Canvas will be used extensively in this course and most materials will be uploaded on Canvas. Use Canvas to find:

- Recorded lectures
- Links to Zoom for the live classes (as required)
- Homework assignments
- Datasets to be used in homework assignments and in-class exercises
- Course materials such as the syllabus and readings;
- Exams
- Powerpoint presentations;
- All course announcements;
- Contact information;
- Grades

At times, there are periodic outages and slow-downs with applications such as Canvas, Zoom, etc. **Please do not wait until the last minute to complete and submit assignments or other requirements. When you experience troubles, please contact me as soon as possible and communicate your situation with me**.

## V.    COURSE REQUIREMENTS

The final grade will be computed from grades on homework (40%), quizzes/exams (50%), and attendance, preparation, and participation in class (10%). More detailed instructions and expectations are described below.

1.   **Class attendance, preparation, and participation (10% of total grade)**
    Students are expected to attend class on time, to complete assigned readings and homework prior to class, and to actively participate in class by asking questions and having discussions regarding readings, homework, lectures, and other in-class activities.

    **Due to the ongoing nature of the pandemic, we may experience scheduling changes or other interruptions this semester. I will do my best to communicate changes with you clearly and rapidly, through Canvas email and announcements. Please do your best to communicate with me any issues you encounter, as we remain flexible and responsive to the ongoing changes on our campus and community.**

    Joining class late and/or leaving early by more than 10 minutes will be counted as an absence. Only three permitted absences are allowed in the event of unexpected emergencies, medical appointments, university-sanctioned events, or religious holidays. When missing a class (or leaving early) for any reason, you are required to email the instructor before the class begins. Starting from the fourth absence, 2% of the total grade per class will be deducted from your final grade.

    When classes are conducted on Zoom instead of in-classroom, please keep your camera on during the introductory portion (~first 5 minutes of class) and actively participate in the entire class session to get full attendance points.

    In the event a class must be canceled, students will be provided an assignment to help them practice the material for that day. The completion of such assignments will count as attendance for that class.

2. **Homework Assignments (40% of total grade)**
   There are <u>nine homework assignments</u>, most of which will be completed through Canvas. The homework assignments will help you practice applying the statistical concepts that are taught in class, usually using R. **Please note that Canvas does not save your answers until you submit your homework assignments.**

   If you have any difficulties solving problems in the assignments, feel free to schedule a time during my office hours to address your questions.

3. **Exams (50% of total grade)**
   There will be <u>four exams</u>, each time-limited to 75 minutes. Exams will cover all material assigned for and discussed in class. Questions on the exams include conceptual questions from the text, homework assignments, lectures, in-class assignments. You will not need to perform R analyses on exams, but you will be asked to interpret R output and correct code. Although each exam will focus mainly on the content since the last test, the content is inevitably cumulative. Given this, students are encouraged to prepare for exams by focusing on the content since the last test and reviewing the material from the entire semester. Review sessions and materials will be provided before each exam.

   Tests are not open-book. All materials needed to complete the exam will be available from Canvas or in-class discussion. Unless explicitly stated by the instructor at the time of the test, no other materials, software, or online content may be used in completing the exams. The use of e-mail or other types of communication is also not permitted. Computer activity during the tests will be monitored and any violation of these policies will be treated as scholastic dishonesty and result in a grade of zero for that exam.

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

4. **Extra Credit**
   **Exam Questions**
   Students have the opportunity to create their own multiple-choice exam questions based on the class material and submit them to the instructor by 11:59 pm on the exam review day (i.e., prior to the exam). If the instructor selects one of the questions, it will be added to the exam, allowing the student to answer their own question in the exam. Priority will be given to questions that promote social justice and/or equity in social work research. Additionally, if a student submits exam questions (at least 2 questions) for all four exams, the student will receive a 1% addition to their final grade in the class, even if none of the student's questions are ever selected for an exam.

## VI. GRADES

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|---|---|
| 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 |

## VII. CLASS POLICIES

**Use of Canvas in Class.** This class uses Canvas as the primary means of communicating with students. The instructor will post all the course materials as well as announcements on-site. **You will be responsible for checking the Canvas course site regularly for any resources and new announcements.** Students can find support from the ITS Help Desk by calling 475-9400 between 8 AM and 6 PM on Monday through Friday.

**Use of Zoom.** Some class sessions will be held in Zoom. When having a class discussion, including student presentations or Q&A sessions, please keep your camera on.

**Classroom Etiquette on Electronic Gadgets.** Cell phones must be put away during class and internet browser tabs should be closed except for approved class activities. Especially when taking exams, phones should be turned off or put away. Students who violate this policy will get 0 grade for the exam.

**Late Assignment Policies. Late assignments will be accepted only with prior permission from the instructor.** Except in the case of extreme emergencies, students should contact the instructor at least 48 hours before the due date to negotiate another deadline. If not, students will lose 3 points per day for their late assignments.

**Course Evaluations.** The instructor will encourage students to provide informal mid-semester feedback to make sure what she's doing supports students' learning. At the end of the semester, students are expected to complete the standard Course Instructor Survey (CIS) provided by the University of Texas at Austin. This formal feedback that students provide in the evaluation will help the instructor to plan the course better in the future.

# VIII.  UNIVERSITY POLICIES

**COVID-19 RELATED INFORMATION.** The University's policies and practices related to the pandemic may be accessed at: https://protect.utexas.edu/

**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.

**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). A student should present the letter to the professor at the beginning of the semester so that needed accommodations can be discussed and followed. The student should remind the professor of any testing accommodations no later than five business days before an exam. For more information, visit: http://diversity.utexas.edu/disability/.

**PROFESSIONAL CONDUCT AND CIVILITY IN THE CLASSROOM.** The professor expects students to act as 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. A course brings together a group of diverse individuals with various backgrounds. Students are influenced and shaped by such factors as race, ethnicity, gender, sex, physical abilities, religious and political beliefs, national origins, and sexual orientations, among others. We expect to learn from each other in an atmosphere of positive engagement and mutual respect. This atmosphere includes working intentionally to recognize and dismantle racism, sexism, heterosexism, and ableism in the classroom. Social Work also deals with complex and controversial issues. These issues may be challenging and uncomfortable, and it would be impossible to offer a substantive classroom experience that did not include potentially difficult conversations relating to challenging issues. In this environment, we will be exposed to diverse ideas and opinions, and sometimes we will not agree with the ideas expressed by others. Nevertheless, the professor requires that students engage one another with civility, respect, and professionalism.

**UNANTICIPATED DISTRESS.** Students may experience unexpected and/or distressing reactions to course readings, videos, conversations, and assignments. If so, students are encouraged to inform the professor. The professor can be responsive and supportive regarding students' participation in course assignments and activities, but students are responsible for communicating clearly what kind of support is desired. If counseling is needed, students may contact a service provider of their choosing, including the UT Counseling Center at 512-471-3515 or online at https://cmhc.utexas.edu/.

**POLICY ON SOCIAL MEDIA AND PROFESSIONAL COMMUNICATION.** Public social networks are not private. Even when open only to approved or invited members, users cannot be certain that privacy will exist among the general membership of sites. If social work students choose to participate in such forums, please assume that anything posted can be seen, read, and critiqued. What is said, posted, linked to, commented on, uploaded, subscribed to, etc., can be accessed and archived, posing potential harm to professional reputations and prospective careers.

Social work students who use social media (e.g. Facebook, Twitter, Instagram) and other forms of electronic communication (e.g. blogs) must be mindful of how their communication may be perceived by clients, colleagues, faculty, and others. Social work students are expected to make every effort to minimize material which could be considered inappropriate for a professional social worker in training. Because of this, social work students are advised to manage security settings at their most private levels and avoid posting information/photos or using any language that could jeopardize their professional image.

Students are asked to consider the amount of personal information posted on these sites and are obliged to block any client access to involvement in the students' social networks. Client material should not be referred to in any form of electronic media, including *any* information that might lead to the identification of a client or compromise client confidentiality in *any* way. Additionally, students must critically evaluate any material that is posted regarding community agencies and professional relationships, as certain material could violate the standards set by the School of Social Work, the Texas Code of Conduct for Social Workers, and/or the NASW Code of Ethics.

Social work students should consider that they will be representing professional social work practice as well as The University of Texas at Austin School of Social Work program while in the classroom, the university community, and the broader area communities.

**POLICY ON ACADEMIC INTEGRITY.** Students who violate University rules on academic 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 academic dishonesty will be strictly enforced. For further information, please visit the Student Conduct and Academic Integrity website at: http://deanofstudents.utexas.edu/conduct.

**USE OF COURSE MATERIALS.** The materials used in this course, including, but not limited to exams, quizzes, and homework assignments, are copyright protected works. Any unauthorized duplication of the course materials is a violation of federal law and may result in disciplinary action being taken against the student. Additionally, the sharing of course materials without the specific, express approval of the professor may be a violation of the University's Student Honor Code and an act of academic dishonesty, which could result in further disciplinary action. This sharing includes, among other things, uploading class materials to websites for the purpose of distributing those materials to other current or future students.

**CLASSROOM CONFIDENTIALITY**. Information shared in class about agencies, clients, and personal matters is considered confidential per the NASW Code of Ethics on educational supervision and is protected by regulations of the Family Educational Rights and Privacy Act (FERPA) as well. As such, sharing this information with individuals outside of the educational context is not permitted. Violations of confidentiality could result in actions taken according to the policies and procedure for review of academic performance located in sections 3.0, 3.1, and 3.2 of the Standards for Social Work Education.

**UNIVERSITY ELECTRONIC MAIL STUDENT NOTIFICATION.** Electronic mail (email), like postal mail, is a mechanism for official University communication to students. The University will exercise the right to send email communications to all students, and the University will expect that email communications will be received and read in a timely manner. Students can find UT Austin's policies and instructions for updating their e-mail address at https://it.utexas.edu/policies/university-electronic-mail-student-notification-policy.

**RELIGIOUS HOLY DAYS.** A student who misses classes or other required activities, including examinations, for the observance of a religious holy day should inform the instructor as far in advance of the absence as possible so that arrangements can be made to complete an assignment within a reasonable period after the absence. A reasonable accommodation does not include substantial modification to academic standards, or adjustments of requirements essential to any program of instruction. Students and instructors who have questions or concerns about academic accommodations for religious observance or religious beliefs may contact the Office for Inclusion and Equity. The University does not maintain a list of religious holy days.

**TITLE IX REPORTING**. In accordance with Title IX of the Education Amendments of 1972, the University of Texas at Austin is committed to maintaining a learning environment that is free from discriminatory conduct on the basis of sex https://titleix.utexas.edu/. Faculty, field instructors, staff, and/or teaching assistants in their supervisory roles are mandated reporters of incidents of sex discrimination, sexual harassment, sexual violence, stalking, dating violence, or any other forms of sexual misconduct. Students who report such incidents will be informed of University resources. Incidents will be reported to the University's Title IX Coordinator. Further information, including student resources related to Title IX, may also be found at https://titleix.utexas.edu/.

**CAMPUS CARRY POLICY.** The University's policy on campus carry may be found here: https://campuscarry.utexas.edu.

**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 and COVID-19 ADVICE LINE (BCCAL).** If students have concerns about their behavioral health, or if they are concerned about the behavioral health of someone else, students may use the Behavior Concerns and COVID-19 Advice Line to discuss by phone their concerns. This service is provided through a partnership between 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 https://safety.utexas.edu/behavior-concerns-advice-line. The Behavior Concerns and COVID-19 Advice Line has been expanded to support The University of Texas at Austin community during the COVID-19 pandemic. By calling 512-232-5050 - Option 2 for COVID-19, students, faculty and staff can be assisted in English and Spanish with COVID-19 support.

**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 in the classroom and the building. Remember that the nearest exit door may not be the one you used when entering 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 are given instructions by the Austin Fire Department, the UT Austin Police Department, or the Fire Prevention Services office.

## IX. COURSE SCHEDULE

The anticipated schedule of activities for this course is as follows. The instructor reserves the option to modify the schedule if deemed necessary, and all changes will be posted to Canvas. References to chapters are from the course textbook or from readings posted on Canvas.

**\*Please note: the first four class sessions will be conducted on Zoom, and the address for class will be posted on Canvas. We anticipate being back to in-person classes on Tuesday Feb 1. Please remain flexible and check your email regularly to determine how to attend class.\***

| Date | Topic / Content | Readings Due | Assignments Due |
|---|---|---|---|
| Class 1 Tues Jan 18 *on Zoom* | • Syllabus Review • Why statistics are important • Math Review | Course Syllabus Appendix F: Math Review | |
| Class 2 Thurs Jan 20 *on Zoom* | Lecture on Chapters 1 & 2 | Ch1. The What and the Why of Statistics *p. 24-55* Ch 2. The Organization and Graphic Presentation of Data *p. 62-109* | |
| Class 3 Tues Jan 25 *on Zoom* | • Q&A and review of Chapters 1& 2 • Intro and Graphics in R | | **Download R and R Studio** |
| Class 4 Thurs Jan 27 *on Zoom* | Lecture on Chapter 3 & 4 | Ch 3. Measures of Central Tendency *p. 126-165* Ch 4. Measures of Variability *p. 177-213* | **Homework 1 Due** |
| Class 5 Tues Feb 1 | • Q&A and review of Chapters 3 & 4 • Central Tendency and Variability in R | | |
| Class 6 Thurs Feb 3 | • Review for Exam 1 | Chapters 1 thru 4 | **Homework 2 Due** *Optional:* Extra Credit test questions due by 11:59 pm |
| Class 7 Tues Feb 8 | **Exam 1: Chapters 1 thru 4** | | |
| Class 8 Thurs | • Review Exam 1 • History of | **Canvas**: Selection from *White Logic, White Methods: Racism* | |

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| Feb 10 | Oppression, Racism, and Social Justice in Research | *and Methodology* by <u>*Zuberi & Bonilla-Silva*</u> Selection from *Weapons of Math Destruction* by Cathy O'Neal | |
| Class 9 Tues Feb15 | Lecture on Chapters 5 & 6 | Ch. 5 The Normal Distribution *p. 229-258* Ch. 6 Sampling and Sampling Distribution *p. 267-307* | **Homework 3 Due** |
| Class 10 Thurs Feb 17 | • Q&A and review of Chapters 5 & 6 • Distributions in R | | |
| Class 11 Tues Feb 22 | Lecture on Chapter 7 | Ch. 7 Estimation *p. 317-349* | **Homework 4 Due** |
| Class 12 Thurs Feb 24 | • Q&A/review of Chapter 7 • Estimation in R | | |
| Class 13 Tues Mar 1 | • Review for Exam 2 | Chapters 5 thru 7 | **Homework 5 Due** *Optional:* Extra Credit test questions due by 11:59 pm |
| Class 14 Thurs Mar 3 | **Exam 2: Chapters 5 thru 7** | | |
| Class 15 Tues Mar 8 | Lecture on Chapter 8 | Ch. 8 Testing Hypotheses p. *359-405* | |
| Class 16 Thurs Mar 10 | • Review Exam 2 • Q&A and review of Chapter 8 • T-tests in R | | |
| March 14-19 | **SPRING BREAK** | | |
| Class 17 Tues Mar 22 | Lecture on Chapters 9 & 10 | Ch. 9 Bivariate Tables *p. 417-456* Ch.10 The Chi-Square Test and Measures of Association *p. 471-509* | |
| Class 18 Thurs Mar 24 | • Q&A and review of Chapters 9 & 10 • Chi-square testing in R | | **Homework 6 Due** |
| Class 19 Tues Mar 29 | • Review for Exam 2 | Chapters 8 thru 10 | **Homework 7 Due** *Optional:* Extra Credit test questions due by 11:59 pm |
| Class 20 Thurs Mar 31 | **Exam 3: Chapters 8 thru 10** | | |
| Class 21 Tues Apr 5 | Lecture on Chapter 11 | Ch. 11 Analysis of Variance *p. 526-549* | |

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| Class 22<br>Thurs<br>Apr 7 | • Review Exam 3<br>• Q&A/review of Chapter 11<br>• ANOVA in R | | |
| Class 23<br>Tues<br>Apr 12 | Lecture on Chapter 12 | Ch. 12 Regression and Correlation p. *561-593* | **Homework 8 Due** |
| Class 24<br>Thurs<br>Apr 14 | • Q&A and review of Chapter 12 (first half)<br>• Correlation in R | | |
| Class 25<br>Tues<br>Apr 19 | • Lecture on Chapter 12 (second half)<br>• How to select a statistical test | Ch. 12 Regression and Correlation *p. 594-606* | **Homework 9 Due** |
| Class 26<br>Thurs<br>Apr 21 | • Review for Exam 4 | | |
| Class 27<br>Tues<br>Apr 26 | • R Software Final Q&A day | | *Optional:* Extra Credit test questions due by 11:59 pm |
| Class 28<br>Thurs<br>Apr 28 | **Exam 4: Chapters 11 and 12** | | |
| Class 29<br>Tues<br>May 3 | Review Exam 4 | | |
| Class 30<br>Thurs<br>May 5 | Class Wrap-Up | | |

## X.     Bibliography

Frankfort-Nachmias, C., & Leon-Guerrero, A. (2018). *Social statistics for a diverse society (8th Ed)*. Thousand Oaks, CA: Sage Publications.

O'neil, C. (2016). *Weapons of math destruction: How big data increases inequality and threatens democracy*. Broadway Books.

Zuberi, T., & Bonilla-Silva, E. (Eds.). (2008). *White logic, white methods: Racism and methodology*. Rowman & Littlefield Publishers.