

**THE UNIVERSITY OF TENNESSEE**  
**COLLEGE OF SOCIAL WORK**  
**DSW PROGRAM**  
**Social Work 620: Clinical Research and Applied Statistics (3 Credit Hours)**  
**Spring 2018**  
**Selected Tuesdays 6:30 pm - 8:30 pm (All times are EST)**

**Instructor:** Liz Thomas, Ph.D., LCSW  
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**Zoom link:**

**Note from the professor:** Please feel free to contact me. Email is usually the best way to connect with me. I encourage you to schedule individual meetings with me on Zoom to talk over your research ideas and/or questions about the course materials.

### **I. Course Description**

This course is designed to help students build knowledge of clinical research and applied statistics. The course will focus on conceptual frameworks, research ethics, formulating research questions and hypotheses, measurement and scale construction, sampling procedures, and research design. The course will also provide advanced knowledge of quantitative and qualitative research coupled with foundational statistics concepts and analytic techniques.

### **II. Course Rationale**

Social work practitioners should be critical consumers of research and possess the knowledge of research and its method in order to use research as a tool for competent and accountable evidence-based practice with at-risk populations. Toward that end, it is essential that advanced social work practitioners have the knowledge and skills necessary to formulate questions about practice and policy, access and critically appraise the research literature available to answer such questions, formulate research questions and corresponding methodology, apply analytical techniques to data sources, and develop skills in developing quality research protocols for evaluating programs and interventions.

### **III. Course Competencies**

By the completion of this course, students are expected to be able to:

1. Understand the importance of the scientific methods for building effective evidence-based practice.
2. Design ethical, feasible, and quality research studies relevant to issues of social work practice.
3. Understand core research method concepts and identify and apply them appropriately to develop research to evaluate processes and outcomes involved in social work practice.
4. Conduct, explain, and interpret descriptive and bivariate statistics.
5. Understand the concepts of statistical inference.

### **IV. Student Learning Objectives**

Students will be able to:

1. Understand all aspects of the research process from conceptualization to design,

- sampling, measurement, and data analysis.
2. Recognize ethical and cultural competency concerns in conducting research with vulnerable populations;
  3. Assess quality of measurement and sampling methodology in research articles;
  4. Employ quantitative and/or qualitative research methods in clinical research.
  5. Gain experience using SPSS program in the application of statistical procedures.
  6. Identify appropriate statistical tests based on level of measurement;
  7. Employ SPSS to describe variables, conduct bivariate analyses, and report results of statistical analysis.

## V. Learning Environment

This course includes both asynchronous and synchronous learning experiences in the online class environment. The student is a co-creator of the learning experience and environment. It is the purpose of this class to provide knowledge and access to resources that will serve as a springboard for class collaboration. The course may include recorded lectures using voice-over PowerPoint, discussion boards, reading assignments, assignments using internet resources, group and individual work, and online activities.

## VI. Text Required for Course

Rubin, A., & Babbie, E. R. (2011). *Research Methods for Social Work* (7th ed.). Belmont, CA: Brooks/Cole.

Additional reading materials will be made available on Canvas.

## VII. University Policies

**CODE OF CONDUCT:** It is the responsibility of the student to read the College of Social Work Ethical Academic and Professional Conduct Code located in the College of Social Work MSSW Handbook ([www.utk.csw.edu](http://www.utk.csw.edu)).

**HONOR STATEMENT:** The University of Tennessee maintains a commitment to an atmosphere of intellectual integrity and academic honesty. Students of the University must pledge that they neither knowingly give nor receive any inappropriate assistance in academic work (Please see *Hilltopics*).

**UNIVERSITY CIVILITY STATEMENT:** Civility is genuine respect and regard for others - politeness, consideration, tact, good manners, graciousness, cordiality, affability, amiability and courteousness. Civility enhances academic freedom and integrity, and is a prerequisite to the free exchange of ideas and knowledge in the learning community. Our community consists of students, faculty, staff, alumni, and campus visitors. Community members affect each other's well-being and have a shared interest in creating and sustaining an environment where all community members and their points of view are valued and respected. Affirming the value of each member of the university community, the campus asks that all its members adhere to the principles of civility and community adopted by the campus: <http://civility.utk.edu/>.

**DIVERSITY AND INCLUSION:** The College of Social Work and the University of Tennessee welcome and honor all people. In accordance with the U.S. National Association of Social Workers (NASW) and the U.S. Council on Social Work Education (CSWE 2015 Educational Policy Statement), "the dimensions of diversity are understood as the intersectionality of

multiple factors including” age, class, color, culture, mental or physical disability and ability, ethnicity, gender, gender expression, gender identity, immigration status, marital status, national origin, political ideology, race, regionality, religion and spirituality, sex, sexual orientation, and tribal sovereign status. The College values intellectual curiosity, pursuit of knowledge, and academic freedom and integrity. “A person’s diverse life experiences may include oppression, poverty, marginalization, and alienation as well as privilege, power, and acclaim” (CSWE 2015 Educational Policy Statement). The College of Social Work promotes social justice and social change, and strives to end discrimination, oppression, poverty, and other forms of social injustice.

**STUDENTS WITH DISABILITIES POLICY:** For course adaptations or accommodations because of a documented disability or to share emergency information, contact The University of Tennessee Office of Disability Services at 100 Dunford Hall (865) 974-6087 to ensure that you are properly registered for services.

### **VIII. Information Literacy/Technological resources**

This course will be conducted online using Blackboard. Students must have a working knowledge of all aspects of Blackboard, particularly accessing assignments and learning resources, viewing PowerPoint presentations, submission of assignments, and utilizing Blackboard for communication with the instructor and students.

### **IX. Course Requirements, Assignments, Assessment, and Evaluation Methods**

#### **Course Requirements**

This is an online class using Canvas and Zoom. Students are expected to attend all online classes, participate in discussions, classroom exercises, group work, and complete all assignments, both graded and not graded. Please note that the course is outlined in the syllabus, but the instructor might also assign readings and other tasks to support the course as it progresses over the semester.

An extension of time for an assignment due to medical or personal emergency is made rarely, at the discretion of the instructor. A student who wishes to receive an extension should consult with the instructor in advance. Late assignments will be penalized 10% for each calendar day past the due date unless alternative arrangements were made with the instructor prior to the due date.

#### **Assignments**

Detailed instructions for each assignment are posted on Canvas.

1. **Discussion Boards:** The purpose of these exercises is to further your understanding of the concepts and apply them as you develop your research projects. Each student will be assigned to a discussion board group. Your discussion board group members will be the same throughout the semester. Students will participate in discussion boards for 4 different topics. Each student should start a thread for the forum in the group discussion board on Blackboard. Post both your own response and provide constructive, useful comments and/or feedback to at least two other students. The discussion board assignments will constitute 20% of your grade (5 points each).

#### **Discussion Board 1: Ethics and Cultural Competence Considerations**

**Discussion Board 2: Research Aims**  
**Discussion Board 3: Evaluating Measurement**  
**Discussion Board 4: Research Methods and Design**

2. **Quizzes:** There will be 3 quizzes. The quizzes cover basic concepts and vocabulary involved in conducting social science research. You are welcome to have study materials with you when you take the quizzes. You will be given a week to take each quiz. You can only log into the quiz once and once you log in to take a quiz, you have 2 hours to complete it. Missed quizzes will be recorded as a “0.” There will be no make-up quizzes. Each quiz will constitute 5% of your grade (5 points each).

**Quiz 1: Problem formulation, conceptualization, operationalization** (Chapters 6&7)

**Quiz 2: Reliability, validity, measurement, sampling** (Chapters 8, 9, 14, pp 445-448)

**Quiz 3: Causal inference and research design** (Chapters 10, 11, 12, 13, 17, 18)

3. **Statistics Labs in SPSS:** You will be given data in SPSS with corresponding lab assignments to complete using SPSS. The labs will constitute 40% of the course grade (10 points each).

**Lab 1 Getting to know the data, describing variables**

**Lab 2 Chi-square**

**Lab 3 Correlation and regression**

**Lab 4 T-test**

4. **Mini Research Proposal:** Each student will write a brief research proposal adhering to APA formatting. The research proposal should include the following components, and will constitute 25% of your grade. Exceeding page limitations for any section will result in points deducted. Use these section headers:

A) *Problem statement and study purpose* (max 2 pages)

This section is a brief introduction, but a critically important part of your proposal. The purpose of this section is to sell your research idea. In this section, you need to briefly describe the problem; describe what we know and don't know; describe what niche your research will fill in the theoretical and/or empirical literature; and why it is important to address your research your question. Please conclude this section with a statement of the purpose of your study.

B) *Literature review* (max 4 pages)

The second part of the proposal is to develop an up-to-date, concise, and critical review of the literature related to your research project. The purpose of this section is to convince your readers you understand the research questions in the larger scientific context. You must show that you have a very good scientific reason for proposing the research. This is not just a descriptive list or summary of each reference. Instead, the review should organize and synthesize the collected literature related to your research project. Your literature review should identify major methodological strengths and limitations (e.g., sample size, study design). Conclude this section with clearly stated research question/s and corresponding hypotheses.

C) Research Design and Methods (max 5 pages)

The final part of the proposal is to describe your research project in detail and as precisely as possible. The purpose of this section is to convince the readers you have completely thought through: (1) how to answer the research questions; and (2) the potential problems in your design and methodology and how you will deal with those problems. Use these section headers:

- a. Research design: Begin with a brief overview of the research design and methodology. This should be derived from the specific objectives and background, and should be no more than 2 or 3 sentences.
- b. Sample and procedures: Describe the setting of your research in terms of its relevance to your research. Describe the sample that you will use and your rationale for using it; and specify sample size and inclusion criteria for sample. Discuss the sample recruitment procedures. In other words, how will you access the data for your study? What are the ethical concerns that you must address and how will you address them? Describe how the data will be collected and who will be collecting it.
- c. Measures: Identify and describe all variables you will use in your research and how will they be measured (e.g., the use of standardized scales, assessment tools, specific interview questions, etc.). Each dependent, independent, and control variable needs to be *operationally* defined. If you will be developing or assessing an intervention, clearly describe the intervention here (e.g., provide a step-by-step explanation of the intervention and its agenda/curriculum; what are the goals or desired outcomes of the intervention?).
- d. Data Analysis Plan: Describe how you plan to analyze your data so that it answers each of your research question/s. Be sure that your planned analyses are appropriate to answer your question/s and that the data you collect fits the chosen analyses.

<b><u>Grading Criteria</u></b>	<b><u>Grading Scale for SW620</u></b>
The course grade will be calculated as follows:	
1. 4 Discussion Boards (5 points each)      20%	A (94-100)      C (74-77)
2. 3 Quizzes (5 points each)      15%	A- (90-93)      C- (70-73)
3. 4 SPSS Statistics Labs (10 points each)      40%	B+ (88-89)      D (60-69)
4. Mini Research Proposal      25%	B (84-87)      F (<60)
	B- (80-83)
	C+ (78-79)

### Course Outline

Assigned readings are to be completed in preparation for class/discussion boards.

All quizzes and assignments are due before class time the day they are listed.

<b>January 9</b>	<p><b>Course Intro</b></p> <p>Meet on Zoom 6:30-8:30 (EST)</p>	<ul style="list-style-type: none"> <li>• <i>Course Overview</i></li> <li>• <i>Application</i></li> <li>• <i>Introductions</i></li> </ul>
<b>January 16</b>	<p><b>Synchronous Session 1</b></p> <p>Meet on Zoom 6:30-8:30 pm (EST)</p>	<ul style="list-style-type: none"> <li>• <i>Scientific research process and clinical research</i></li> <li>• <i>Understanding quantitative vs. qualitative research methods</i></li> <li>• <i>Theory in social work research</i></li> </ul> <p><b>Readings:</b> Rubin &amp; Babbie (2011):            Chapter 1    Why Study Research?            Chapter 2    Evidence-Based Practice            Chapter 3    Philosophy and Theory in Social Work Research</p> <p>Jenson, J.M. (2005). Connecting science to intervention: Advances, challenges, and the promise of evidence-based practice. <i>Social Work Research</i>, 29(3): 131-135.</p>
<b>January 23</b>	<p><b>Discussion Board 1 Due</b></p> <ul style="list-style-type: none"> <li>• <i>Ethics and cultural competence in clinical research</i></li> </ul> <p><b>Readings:</b> Rubin &amp; Babbie (2011)            Chapter 4    The Ethics and Politics of Social Work Research            Chapter 5    Culturally Competent Research</p> <p>Scharff, D.P., Mathews, K.J., Jackson, P., &amp; Hoffsuemmer, J. (2010). More than Tuskegee: understanding mistrust about research participation. <i>Journal of Health Care for the Poor and Underserved</i>, Volume 21(3), 879-897.</p> <p>Valentine G.; Butler R.; Skelton T. (2001). The ethical and methodological complexities of doing research with 'vulnerable' young people. <i>Ethics, Place and Environment</i>, 4, 119-125.</p> <p>Spend 30 minutes reviewing:            University of Tennessee, Knoxville, IRB website            NASW Code of Ethics            NASW Cultural Competence Standards</p>	

<p><b>January 23</b></p>	<p><b>Synchronous Session 2</b></p> <p>Meet on Zoom 6:30-8:30 pm (EST)</p>	<ul style="list-style-type: none"> <li>• <i>Problem formulation</i></li> <li>• <i>Conceptualization and operationalization</i></li> </ul> <p><b>Readings:</b> Rubin &amp; Babbie (2011) Chapter 6 Problem Formulation Chapter 7 Conceptualization and Operationalization</p>
<p><b>January 30</b></p>	<p style="text-align: center;"><b>Discussion Board 2 Due</b></p> <ul style="list-style-type: none"> <li>• <i>Research ideas</i></li> </ul>	
<p><b>February 6</b></p>	<p><b>QUIZ 1 Due</b></p>	
<p><b>February 6</b></p>	<p><b>Synchronous Session 3</b></p> <p>Meet on Zoom 6:30-8:30 pm (EST)</p>	<ul style="list-style-type: none"> <li>• <i>Reliability and validity</i></li> <li>• <i>Constructing measures</i></li> <li>• <i>Sampling methods</i></li> </ul> <p><b>Readings:</b> Rubin &amp; Babbie (2011) Chapter 8 Measurement Chapter 9 Constructing Measurement Instruments Chapter 14 Sampling Pp 445-448 Qualitative sampling methods</p>
<p><b>February 13</b></p>	<p style="text-align: center;"><b>Discussion Board 3 Due</b></p> <ul style="list-style-type: none"> <li>• <i>Measurement and Sampling</i></li> </ul> <p><b>Readings:</b> Guilamo-Ramos, V., Dittus, P., Jaccard, J., Goldberg, V., &amp; et al. (2006). The content and process of mother-adolescent communication about sex in Latino families. <i>Social Work Research</i>, 30(3), 169-181.</p> <p>Mann, E. A., &amp; Reynolds, A. J. (2006). Early intervention and juvenile delinquency prevention: evidence from the Chicago Longitudinal Study. <i>Social Work Research</i>, 30(3), 153-167.</p>	
<p><b>February 20</b></p>	<p><b>QUIZ 2 Due</b></p>	
<p><b>February 20</b></p>	<p><b>Synchronous Session 4</b></p> <p>Meet on Zoom 6:30 -8:30 pm (EST)</p>	<ul style="list-style-type: none"> <li>• <i>Experimental and quasi-experimental designs</i></li> <li>• <i>Single-case evaluation designs</i></li> <li>• <i>Program evaluation</i></li> <li>• <i>Qualitative research methods and designs</i></li> </ul> <p><b>Readings:</b> Rubin &amp; Babbie (2011): Chapter 10 Causal Inference and Experimental Designs Chapter 11 Quasi-Experimental Designs Chapter 12 Single-Case Evaluation Design Chapter 13 Program Evaluation Chapter 17 Qualitative Research: General Principles</p>

		Chapter 18 Qualitative Research: Specific Methods
<b>February 27</b>	<b>Discussion Board 4 Due</b> <ul style="list-style-type: none"> <li>• <i>Research Methods and Design</i></li> </ul>	
<b>March 6</b>	<b>Quiz 3 Due</b>	
<b>March 6</b>	<b>Synchronous Session 5</b> Meet on Zoom 6:30-8:30 pm (EST)	<ul style="list-style-type: none"> <li>• <i>Familiarizing yourself with the data</i></li> <li>• <i>Basic descriptive statistics: percentages, ratios and rates, frequency distributions</i></li> </ul> <b>Readings:</b> Rubin & Babbie (2011) Chapter 20 Quantitative Data Analysis Chapter 21 Inferential Data Analysis: Part 1 Chapter 22 Inferential Data Analysis: Part 2
<b>March 13</b>	<b>Spring Break</b>	
<b>March 20</b>	<b>Synchronous Session 6</b> Meet on Zoom 6:30-8:30 pm (EST)	<b>LAB 1: Getting to know the data, describing variables</b>
<b>March 27</b>	<b>Synchronous Session 7</b> Meet on Zoom 6:30-8:30 pm (EST) <b>Lab 1 worksheet due</b>	<b>LAB 2: Chi-Square</b>
<b>April 3</b>	<b>Synchronous Session 8</b> Meet on Zoom 6:30-8:30 pm (EST) <b>Lab 2 worksheet due</b>	<b>LAB 3: Correlation and Regression</b> <b>LAB 4: T-test</b>
<b>April 10</b>	<b>Synchronous session 9</b> <b>Lab3 and Lab 4 worksheets due</b>	<ul style="list-style-type: none"> <li>• <i>Qualitative analysis</i></li> <li>• <i>Course Wrap-up</i></li> </ul> <b>Readings:</b> Rubin & Babbie (2011) Chapter 19 Qualitative Data Analysis
<b>Mini research proposals Due April 24</b>		