COURSE SYLLABUS

I. COURSE DESCRIPTION

The purpose of this course is to introduce you to statistical methods relevant to evidence-based social work practice and evaluation. You will learn how to select, calculate and interpret appropriate statistics applicable to common data analysis situations related to generalist social work practice. You will also develop your knowledge and skills related to the latest version of the Statistical Package for Social Scientists (SPSS). This course serves as the foundation for advanced social work research courses, including SWK 455. Those of you who are majoring in social work must earn a grade of C or better in this course.

REQUIRED TEXTS:


RECOMMENDED TEXTS:


II. CURRICULUM DESCRIPTION

The BSW program at SFA features the application of knowledge and skills of generalist social work practice with systems of all sizes.

Generalist practice is a practice perspective that serves client systems utilizing ecological systems approach focusing on persons, families, groups, organizations and communities. A narrow cadre of theories does not confine it: rather it is versatile enough to allow problems and situations, as well as, strengths, capacities, and resources, to determine the practice approach. Generalist practice employs a problem-solving framework and a broad knowledge, value, and skill base which demand ethical practice and on-going self-assessment. Briefly generalist social work practice:

- Is multi-level to include individuals, families, groups, organizations, and communities
- Is multi-theory, allowing for the free selection of theories as appropriate
- Utilizes a problem identification and solving focus that follows a problem-solving framework
- Utilizes multiple interventions at multiple levels, as appropriate
- Addresses the complexity of individual, family, group, organizations, and community system interactions
- Requires an integration of awareness, competence, and professional response to issues of values, ethics, diversity, culture, social justice, and population-at-risk

III. PROGRAM LEARNING OUTCOMES (CSWE Core Competencies)

1. Demonstrate Ethical and Professional Behavior.
2. Engage Diversity and Difference in Practice.
5. Engage in Policy Practice.
6. Engage with Individuals, Families, Groups, Organizations, and Communities.
7. Assess, Individuals, Families, Groups, Organizations, and Communities.
8. Intervene with Individuals, Families, Groups, Organizations, and Communities.
9. Evaluate Practice with Individuals, Families, Groups, Organizations, and Communities.

*Educational Policy and Accreditation Standards (EPAS, 2015) from the Council on Social Work Education

IV. Student Learning Outcomes

Upon completion of this course, each student should be able to:

1. Articulate an understanding of statistics and their application to generalist social work practice, including practice with diverse and at-risk populations (Competency 4, 7, 9).
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 (Competency 4, 9).

3. Explain, calculate and interpret inferential statistics including probability and hypothesis tests (Competency 4, 9).

4. Demonstrate an ability to utilize SPSS to run descriptive and inferential statistical tests (Competency 4, 9).

5. Demonstrate an ability to read and interpret basic charts, graphs, and SPSS output (Competency 4, 9).

6. Demonstrate an ability to identify and apply the correct statistical technique to a research question or hypothesis (Competency 4, 9).

7. Apply statistics in a value neutral manner that is consistent with the NASW Code of Ethics and IFSW/IASSW Code of Ethics (i.e., not discriminatory or prejudicial, especially toward diverse and at-risk populations) (Competency 1, 4, 9).

8. Identify examples of how statistics are utilized to guide and evaluate generalist social work practice, including evaluation of self, client outcomes, service delivery and programs (Competency 4, 9).

9. Articulate an understanding of the use of statistics and statistical data to advance the protection of human rights, as well as social and economic justice (Competency 3, 4, 9).

10. Demonstrate the principles of logic, scientific inquiry, and culturally informed and ethical approaches to building knowledge (Competency 1, 2, 4).

11. Articulate the understanding that evidence that informs practice derives from multidisciplinary sources and multiple ways of knowing (Competency 4).

V. INSTRUCTIONAL METHODS

The primary instructional model for this course is collaborative learning. Specifically, I will set the course content, course objectives, and methods of classroom assessment. The course will incorporate the following instructional strategies: lecture, class discussion, online activities, assigned readings, and homework assignments. You are encouraged to actively participate in activities, ask questions, and contribute comments for discussion. You are also encouraged to offer input regarding instructional strategies and assignments. Most importantly, you are expected to be active learners and to ask for clarification when you have questions. The goal of this approach is to develop a safe learning environment that addresses a variety of learning styles, promotes critical thinking, and fosters creativity.

VI. COMPUTER REQUIREMENTS

This course will utilize SPSS (Statistical Package of Social Scientists) to conduct statistical analysis in the classroom and for homework assignments. Please refer to the SPSS package for the minimum system requirements. You are expected to complete your homework assignments using a computer and SPSS. If you do not have a personal computer, the
necessary hardware and software are available in the LINC, located in Steen Library on the SFASU campus.

This course will utilize Brightspace/D2L to support the delivery of course content (for help with Brightspace/D2L go to https://www.sfaonline.info/supportandtutorials). You will need basic skills regarding the use of a word processor and web browser. You must have access to a computer that meets SFA’s minimum computer requirements (see https://www.sfaonline.info/d2ltutorials for details). Computers are available to you through a number of labs across campus (see www.sfasu.edu or the instructor for details).

VII. COURSE SCHEDULE

Week 1  (1/14)  Course Overview/D2L/EPAS

Why study statistics?
Implications (diversity, at-risk populations, practice, values and ethics, EPAS)

What is the relationship between statistics and EBP (Evidence-based Practice)?

How do I prepare for data analysis?
Constructing a codebook
Setting up a SPSS database
Data entry
Readings: Rubin - Chapters 1, 2 & Appendix K; Holcomb - Chapter 2; NASW Code of Ethics; IFSW/IASSW Code of Ethics; CSWE EPAS

How do I pick a statistic?
Review of Key Research Methodology Concepts
Statistics and the scientific method
Levels of measurement
Readings: Rubin - Chapter 3; Holcomb - Chapter 1
Homework: Level of measurement

Week 2  (1/21)  Who was in my sample?

Frequency distributions
Cross-tabulated tables
Implications for generalist social work practice
Readings: Rubin - Chapters 4 & 5; Holcomb - Chapters 3 & 4
Homework: Frequency distributions; Cross-tabulation tables

Week 3  (1/28)  How can I describe the distribution of scores for different variables?

Types of Distributions
Measures of central tendency (mean, median, and mode)
Measures of dispersion (variance, standard deviation, and range)
Comparing groups on central tendency and dispersion
Implications for generalist social work practice
Readings: Rubin - Chapters 6, 7 & 8; Holcomb - Chapters 6 & 7
Homework: Central tendency; Variability; Comparing central tendency and variability

Week 4  (2/4)  How can I compare one person’s data value to the distribution of all scores?

Measures of relative standing (percentiles, percentile ranks, and standard scores)
Implications for generalist social work practice
**Readings:** Rubin - Chapter 9; Holcomb - Chapter 8

**Homework:** Standard scores

**Week 5**
(2/11)

Exam I

*How do I draw conclusions about a population based on sample data?*

- Probability sampling
- Sampling Distributions
- Hypothesis testing
- Type I and Type II Errors
- Significance Levels
- Implications for generalist social work practice

**Readings:** Rubin - Chapters 10, 11 & 12

**Homework:** No homework

CLASS TBD – Hogg Foundation Grantee Meeting

**Week 6**
(2/18)

*How does my sample compare to the population I think it came from?*

Comparing samples and populations (One sample t-test & Chi-square goodness of fit test)

Implications for generalist social work practice

**Readings:** Rubin - Chapters 14 & 16; Holcomb - Chapters 12 & 16

**Homework:** One-sample t-test; Chi-square goodness of fit test

**Week 7**
(2/25)

*How does my sample compare to the population I think it came from? (cont)*

*How can I determine group differences when the variable of interest is nominal?*

Tests of cross-tabulated tables (Chi-square test of independence)

Implications for generalist social work practice

**Readings:** Rubin - Chapters 14 & 16; Holcomb - Chapter 14 & 17

**Homework:** Chi-square test of independence

**Week 8**
(3/4)

*How can I identify differences in two population groups?*

Tests comparing two different groups (Independent groups t-test & Mann-Whitney U test)

Implications for generalist social work practice

**Readings:** Rubin - Chapters 14 & 16; Holcomb - Chapter 14 & 17

**Homework:** Independent Groups t-test

Exam II

SPRING BREAK begins March 7, 2020

**Week 9**
(3/18)

*How can I pinpoint group differences when there are more than two population groups?*

Tests comparing more than two different groups (One-way ANOVA & Kruskal-Wallis Test)

Implications for generalist social work practice

**Readings:** Rubin - Chapter 15; Holcomb - Chapter 15

**Homework:** One-way ANOVA; Kruskal-Wallis Test

**Week 10**
(3/25)

*How can I evaluate change or differences within a single group?*

Parametric tests comparing differences within a single group (Correlated groups t-test & Repeated measures ANOVA)

Non-parametric tests comparing differences within a single group (Sign test & Wilcoxon in matched-pairs signed ranks test)

Implications for generalist social work practice

**Readings:** Rubin - Chapters 14 & 15; Holcomb - Chapter 13

**Homework:** Correlated Groups t-test; Nonparametric correlated groups tests
<table>
<thead>
<tr>
<th>Week 11</th>
<th>How do I evaluate the impact of more than one predictor?</th>
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<tbody>
<tr>
<td>(4/1)</td>
<td>Two-way ANOVA</td>
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<td>Implications for generalist social work practice</td>
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<tr>
<td></td>
<td><strong>Readings:</strong> Rubin- Chapter 14</td>
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<td><strong>Homework:</strong> Two-way ANOVA</td>
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<tr>
<th>Week 12</th>
<th>Exam III</th>
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<tr>
<td>(4/8)</td>
<td>How can I evaluate the impact of more than one predictor when the groups are different?</td>
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<td></td>
<td>Analysis of Covariance (ANCOVA)</td>
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<td>Implications for generalist social work practice</td>
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<tr>
<td></td>
<td><strong>Readings:</strong> Rubin- Chapters 14</td>
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<tr>
<td></td>
<td><strong>Homework:</strong> ANCOVA</td>
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<tr>
<th>Week 13</th>
<th>How can I describe the relationship between two variables?</th>
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<tr>
<td>(4/15)</td>
<td>Measures of Association (Correlation coefficients, Pearson’s $r$, Spearman’s rho, PRE interpretation of association)</td>
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<tr>
<td></td>
<td>Implications for generalist social work practice</td>
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<td><strong>Readings:</strong> Rubin- Chapters 17 &amp; 18; Holcomb- Chapter 10</td>
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<td></td>
<td><strong>Homework:</strong> Pearson’s $r$; Spearman’s rho</td>
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<tr>
<th>Week 14</th>
<th>How do I evaluate single-systems?</th>
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<tr>
<td>(4/22)</td>
<td><strong>Readings:</strong> Rubin- Chapter 19</td>
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<td><strong>Homework:</strong> No homework</td>
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<th>Week 15</th>
<th>Final Presentation &amp; Exam IV (Final Exam)</th>
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<tr>
<td>(5/6)</td>
<td><strong>Wrap up and Review for Final Exam</strong></td>
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VIII. COURSE REQUIREMENTS

A. Class Attendance and Participation: In order for the class to discuss the readings, it is essential for you to read assigned material before coming to class, to attend class regularly, and to participate in class discussion. Furthermore, you are expected to arrive on time and stay for the duration of the class. Absences and/or a persistent pattern of tardiness will affect your grade. Finally, you are responsible for all material covered in class and assigned in the syllabus, whether or not you have attended class.

Cell Phones/Pagers/Electronic Devices: Such devices are disruptive to the classroom environment and you are asked to refrain from using them during class. Please place all such devices on silent mode or turn them off during class. Repeated interruptions may result in a deduction of points from your final average.

B. Readings: The course outline provides a list of required readings for each week. Since lectures and class discussions are designed to answer questions about the material and expand upon the basic concepts, you are expected to complete the assigned readings prior to class. Furthermore, you are expected to come to class prepared to discuss the information, as evidenced by active participation in class discussion. For example, you should present well formulated questions and comments that demonstrate prior preparation.

C. Homework Assignments: A total of 19 homework assignments will be given over the course of the semester. The homework assignments will be given weekly via D2L and will focus on content addressed during lecture. Specifically, the assignments will provide you with an opportunity to practice using SPSS to apply the statistical procedures learned in class. Each homework assignment will be available immediately following the related lecture and will remain available until 1 hour prior to the exam that addresses the homework material. Each homework assignment is worth 10 points and you may complete the homework assignments up to 2 times during the availability period (only the highest grade will be counted). Once you start a homework assignment, you will have 2 hours (120 minutes) to complete it. Homework assignments not completed by the end of the availability period will receive a grade of “0”. You will not be allowed to make-up homework assignments.

You are expected to complete your homework assignments individually. The homework assignments are designed to prepare you for the exams. If you have difficulty completing the homework assignments, you will most likely have difficulty completing the exams. Thus, you are encouraged to use class time and/or meetings with the instructor to address questions about the material.
D. **Exams:** Four major application exams will be given during the semester. Exam I will cover *Why study statistics?* through *How do I compare one person’s data value to the distribution of all scores?*. Exam II will cover *How do I draw conclusions about a population based on sample data?* through *How do I identify differences in two population groups?*. Exam III will cover *How can I pinpoint group differences when there are more than two population groups?* through *How can I evaluate change or differences within a single group?*. Exam IV (final exam) will cover *How do I evaluate the impact of more than one predictor?* through *How do I interpret the strength and importance of relationships?*. Exam IV (final exam) will also evaluate your knowledge of material covered by the first three exams. All material provided on the topics, including all assigned readings, discussions, lectures, and guest presentations are subject to examination. The exams will consist of matching, true/false, multiple choice questions, and/or essay questions. The exams will evaluate your knowledge of concepts related to statistics and ability to conduct statistical analyses. All of the exams will be closed book.

You are expected to take all exams at the scheduled time. Permission to miss any exam will be based on the policy for excused absences as stated in the SFASU General Bulletin (available online at [www.sfasu.edu/bulletin](http://www.sfasu.edu/bulletin)). Missing an exam without either prior permission or an excused absence will result in a grade of "0" on that exam. The instructor will schedule make-up exams.

**GRADING:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
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<tr>
<td>Homework Assignments – 19 @ 10 pts. each</td>
<td>190</td>
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<tr>
<td>Exams 4 @ 100 pts. each</td>
<td>400</td>
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<td><strong>Total</strong></td>
<td><strong>590</strong></td>
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**GRADING SCALE:**

- **A** 528–590
- **B** 469–527
- **C** 410–468
- **D** 351–409
- **F** 0–350

**Academic Integrity (SFASU Policy A-9.1)**

Honesty and representing one’s knowledge and abilities appropriately are important ethical principles of the social work profession. All violations of the Academic Integrity Policy will be addressed in accordance with SFASU Policy A-9.1 (SFASU Policy A-9.1 can be found at the web address below). All incidents will result in a grade of “0”. Given the limited number of graded assignments in this course, a “0” could have serious consequences for the student’s academic standing.
Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

**Definition of Academic Dishonesty**
Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit.

**Withheld Grades- Semester Grades Policy (A-54)**
Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

**Acceptable Student Behavior**
Classroom behavior should not interfere with the instructor's ability to conduct the class or the ability of other students to learn from the instructional program (see the Student Conduct Code, policy D-34.1). Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the Early Alert Program. This program provides students with recommendations for resources or other assistance that is available to help SFA students succeed.

**IX. STUDENTS WITH SPECIAL NEEDS AND DISABILITIES**
To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the
accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.

SELECTED BIBLIOGRAPHY


