

University of North Dakota
Department of Social Work
Summer Semester 2007
Special Topics: Statistics
MW
1:00 -4:45

5/14/07-06/20/07
Gillette Rm. 303

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Office Hours: by appointment

I. Standard Syllabus Information

Course Description

Special Topics 493: Statistics 3 credits: This three credit course will educate students about the different quantitative methods used to analyze data. The focus of the course will be on univariate, bivariate, and multivariate statistics and the descriptive and inferential nature of statistical reasoning. The course will focus on frequency distributions, the normal curve, z scores, t-tests, ANOVA, cross tabs, correlation, linear regression, multiple correlations, multiple regression, and non-parametric statistics. The course will provide an opportunity for students to focus on the application and interpretation of statistics.

Relationship between This and Other Courses

The course is design to provide a baseline understanding of statistics in which students can then think critically about research as it relates to content discussed in the social work research and practice courses.

Course Objectives

At the conclusion of SWK 493, students will be able to:

1. Demonstrate the ability to think critically when critiquing and summarizing statistical analyses and in the choice of statistical tests to analyze quantitative data.
2. Understand the application of the ethical mandates of NASW for social work research and the use of statistical analysis.
3. Understand the influence of diverse and under-represented populations as it relates to the utilization of statistical analysis research.
4. Understand how social and economic justice is affected by and reflected in the design and publication of quantitative research.

5. This objective applies to field and other courses.
6. Be able to use statistical findings to inform generalist practice at multiple levels of practice.
7. Understand the relationship between statistical theories and the use of statistics
8. This objective applies to field and other courses.
9. Critique choice of tests used for statistical analysis and understand the use of statistical analyses in the evaluate of entry level practice.
10. Use communication skills appropriately in technical writing and giving oral presentations.
11. Consult and seek supervision as needed.
12. This objective applies to field and other courses.

Classroom Policies

Important classroom policies are available in their entirety at web sites listed here.

Class Attendance and Participation

Students are expected to participate in all course learning opportunities. <http://www.und.edu/dept/registrar/catalogs/catalog/ugdept/more.htm>. Faculty will inform students of course expectations, including grading criteria, during the first week of class.

Non-Discrimination

There shall be no discrimination against persons because of race, religion, age, creed, color, sex, disability, sexual orientation, national origin, marital status, veteran's status or political belief or affiliation, and equal opportunity and access to facilities shall be available to all. <http://sos.und.edu/csl>

Disability Statement

If you have emergency medical information to share with me, if you need special arrangements in case the building must be evacuated, or if you need accommodations in this course because of a disability, please make an appointment with me. My office location is 301C Gillette Hall and hours are by appointment. If you plan to request disability accommodations, you are expected to register with the Disability Support Services (DSS) office (190 McCannel Hall, 777-3425 v/tty). <http://www.und.edu/dept/dss/>

Grievance

Student grievances are pursued through the [College of Education and Human Development Grievance Procedure](#) or <http://www.und.edu/dept/csl/appendix-ii.htm>

Scholastic Dishonesty

Students are expected to adhere to the NASW Code of Ethics and the Code of Student Life, including avoiding cheating, plagiarism, and collusion.

<http://www.und.edu/dept/csl/section-3.htm>

COURSE OUTLINE

Required Texts:

Rubin, A. (2007). *Statistics for Evidence-Based Practice and Evaluation*. Belmont, CA: Thomson.

Recommended Text:

Patterson, D. A. and Basham, R. E. (2006). *Data Analysis with Spreadsheets*. Boston, Mass: Pearson.

Course Schedule: The course schedule is subject to change with notice.

Day	Topics	Readings	Assignment Due Dates
5/14	Introduction, Syllabus, Review of Basic Math, why study statistics, Lying with Statistics, Ethical Considerations, Methodology review	Rubin ch 1, Appendix a, b	
5/16	The Nature of Data, Frequency distributions, graphs and charts, Introduction to Excel Frequency distribution in excel	Rubin, Ch 3, 4 <i>Article 1: Disclosure of student status to clients: Where do MSW programs stand</i>	
5/21	Measures of central tendency, measures of dispersion Using Excel for descriptive statistics	Rubin, Ch 5, 6 <i>Article 2: The Median isn't the Message</i>	Quiz 1 Paper 1 due
5/23	Normal Distributions, z-scores, percentiles	Rubin, Ch 7, 8	Paper 2 due
5/28: Memorial Day	No Class	No Class	No Class
5/30	Probability and sampling, hypothesis testing and statistical significance, type I and type II errors	Rubin, Ch 9, 10, 11	Excel assignment 1 due
6/4	T-test, ANOVA Using excel for bivariate statistics	Rubin, Ch 12, 13 <i>Article 3: Solution Focus brief therapy</i>	Quiz 2

		<i>and the treatment of depression: A pilot study</i>	
6/6	Cross-tabs and chi-square, correlations Using excel for bivariate statistics	Rubin, Ch 14, 15 <i>Article 4: Reference list accuracy in social work journals</i>	Paper 3 due
6/11	Regression	Rubin, ch 17, appendix D <i>Article 5: The process of burnout among mental health providers</i>	Paper 4 due Excel assignment 2 due
6/13	Single subject design Using Excel for single subject design	Rubin, ch 18	Quiz 3 Paper 5 due
6/18	Non-traditional approaches, non parametric approaches	Rubin, ch 16 appendix E	
6/20	Course Summary Final Exam All work due		Excel assignment 3 due

Course Assignments

Excel Lab Assignments: There will be three Excel assignments throughout the semester. You will need to print out your results and develop up to a 1 page paper describing your results.

Journal articles (Paper): Students will complete a 1-2 page summary of each article. The summary will address the following questions

1. Summarize the premise of the article (5 points)
2. Identify the variables used in terms of independent and dependent variables (5 points)
3. Name and describe in detail the statistical tests reported in the article (10 points)
4. Describe in detail the statistical findings of the article. Make sure you make reference to the variables used in the study. (10 points)
5. Explain how the statistical findings informed the results and discussion of the article (10 points)

Quizzes: There will be 3 quizzes during the 6 week period. Quizzes will be worth 20 points apiece.

Final: A comprehensive exam will be given the last day of class. The final is worth 100 points

Class Participation: Personal Response Clickers will be used in this class. Students will be assigned a clicker and are expected to take it at the beginning of the class and return it at the end. Using the clicker response system you will be asked to respond to questions about the content. The clickers will allow for me (and only me) to keep track of who responds. By using the clickers, I will be able to gauge your understanding of the content. You must respond to a minimum of 80% of the questions over the course of the semester to receive full credit for class participation. If you respond to 60-79% of the questions you will receive 8 points, while 40-59% will receive 5 points, while 20-39% will receive 3 points and below 19% will receive no points.

Grading

Excel assignments @ 25 points each	75 points
Journal assignments 5 at 40 points each	200 points
Quizzes 3 at 20 points each	60 points
Class Participation	10 points
Final at 100 points	100 points
total	445 points

Grading

A= 90-100 percent

B= 80-89 percent

C= 70-79 percent

D= 60-69 percent

F= 59 percent or below