Research Methodology I & II

Doctoral Program Fall / Spring 2018
Wurzweiler School of Social Work
Thursdays 4-6pm

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RATIONALE:

This course will address itself to the following issues:

1. the purposes of social research in social work;
2. the process of initiating research with emphasis on problem formulation;
3. strategies of carrying out research;
4. the application and consequences of research methodologies;
5. advantages, dangers, ethical and legal implications of using research findings;
6. the importance of critical reading of research;
7. the application of computer techniques of research.

In addition to the cognitive aspects, the course will also concentrate on two practical areas; the application of research principles through students' participation in a class or individual research project, and the development of library and research writing skills.

OUTCOMES:

1. The student will be able to apply computer technology to research (STATA and the Internet).
2. The student will demonstrate the ability to critically analyze a research report.
3. The student will demonstrate knowledge of sampling.
4. The student will demonstrate and understanding of survey design.
5. The student will demonstrate and understanding of the benefits of the various modes of observation (direct, unobtrusive).
6. The student will demonstrate knowledge of descriptive statistics such as central tendency and variation.
7. The student will demonstrate knowledge of correlation analysis.
8. The student will demonstrate knowledge of inferential statistics such as chi-square, Student's T test and Analysis of Variance.
9. The student will demonstrate knowledge of the ethical implications of research.
10. The student will demonstrate knowledge of bivariate data analysis.
11. The student will demonstrate knowledge of multi-variate statistics such as multiple regression, logistic regression and multiple analysis of variance
12. The student will be able to conduct independent research as demonstrated by the final paper

Assignments

All assignments should be completed on time. Instructions for completion of the assignments are included in this outline. Short exams and quizzes will also be given.

Readings

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The following general texts are required for this course

Acock Alan C.. A Gentle Introduction to Stata 4nd edition Stata Press. Texas. 2010 ISBN: 1-59718-075-0 $54

Tabachnick Barbara G. and Fidell, Linda S. Using Multivariate Statistics, 5th ed. Allyn & Bacon. Boston, MA. 2006 ISBN: 0205459382 $149

The following general texts are recommended for this course **Order directly from STATA Web Site**

Kohler Ulrich and Kreuter Frauke. 2nd ed. Data Analysis Using Stata Stata Press. 2009 ISBN: 1-59718-046-7 $52

Long Scott J.and Freese Jeremy. Regression Models for Categorical Dependent Variables Using Stata 2nd Edition . Stata Press 2006 ISBN: 1-59718-011-4 $58.

The following software is required. Student versions are available at reduced cost

Stata IC 14.0 ($198)
http://www.stata.com/order/new/edu/gradplans/student-pricing/

Select Perpetual License STATA/IC 15

In addition to reading from the text, students will receive handouts and resource materials periodically throughout the course. Additional optional readings will be suggested as they pertain to the topic area we are discussing. Students are also expected to read extensively in the substantive area of their selected project, which will be reflected (in summary form) in their written review and synthesis of the literature as called for in Assignment #3.

Course Assignments and Requirements
Students are expected: 1-to attend and participate in class sessions; 2-to submit **on time** the 3 written assignments (see attached) and 3-present and discuss their written work with the class.

I. Review of nature and purpose of research./ Problem Formulation

Session #1-2

Required Readings:
1. Babbie, Chaps 1 & 2, pp 103-208.

2. Selltiz, C. "Selection and Formulation of a Research Problem," in Selltiz, Claire et al. Research Methods in Social Relations, Henry Holt and Co. 1976, Revised Edition.

Handouts: "Outline of Research Report."

II. Conceptualization, Operationalization and Measurement.

Sessions #3

Required Readings:
1. Babbie, pp. 127-207

III. Research Design: Exploratory, Descriptive and Experimental Studies.

IV. Survey Research and Questionnaire Construction

Sessions #4 [Assignment 1 due on session 5]

Required Readings:
1. Babbie, Chap. 4, pp 247-291

Recommended:
1. Campbell and Stanley, Experimental and Quasi-Experimental Design for Research, McNally, 1966.

V. The Logic of Sampling, probability and non-probability sampling methods.

Sessions 5-6

Required Readings:
1. Babbie, Chap. 7, pp. 247-291

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VI Review of Basic Statistics.

Session #7-9

Babbie 479-523
Taachnick pp-31-55

Bivariate Statistics

Session 10-11

Crosstabs
T-test
Onaway ANOVA
Correlation: Pearson, polychoric and tetrachoric

Session 12-28

Multivariate Data Analysis
Tabachnick 111-170 275-315 322-377 517-648 653-764

recommended
Acock pp 177-270
Kohler & Kreuter 245-323

Multiple Regression (OLS, Robust, Median Censored) Logistic regression (binary multinomial)
Exploratory Factor Analysis (EFA) using Mplus (with continuous and categorical data)
Confirmatory Factor Analysis (CFA) using Mplus
Analysis of covariance
Introduction to Structural Equation Modeling (SEM)

Assignment #1

As a preliminary step to developing your dissertation proposal in greater detail (see assignment #5), submit the following:

1. Statement of the general problem you are studying and why it is important.

2. Briefly discuss the theoretical/conceptual framework for your study.

3. List the major hypothesis and/or research question.

4. Prepare a chart on your major variables as identified in item 2 above with information entered under the following column headings:

a) name of variable
b) classification (dependent, dependent, etc.)
c) conceptual definition
d) operational indicators

5. Briefly identify and justify the type of research design you are considering.

Exam# 1

Basic Statistics

You will be given a data set and asked to produce basic statistics
Frequencies Descriptives T-test Chi-square
Briefly Discuss the findings

Assignment #2

Using the concepts you developed in assignment #1 develop the following:

1: Describe how plan to measure the concepts identified in assignment #1.
2: Develop a method of observation based on the concepts in assignment #1.

Exam# 2

Multi Variate Statistics

1. You will be given a data set with a question to be answered. You will be requested a apply an appropriate Multi Variate Statistics to empirically answer the question.