

## **Course Syllabus**

### **112-2 Research Methods in Social Work: Quantitative Research**

- Class Level: Graduate Level
- Credit Numbers: 3
- Course Number : To be determined.
- Course Dates : To be determined.
- Course Time: To be determined.
- Classroom : To be determined.
- Instructor : Dr. Shinshin Chen, Associate Professor  
Department of Social Work, Chaoyang University of Technology
- Instructor's Office : D-801
- Office Hours : To be determined or by appointment
- E-mail: schen@cyut.edu.tw
- Extension : 4430 or 7698

#### **COURSE DESCRIPTION**

Principles and techniques of research appropriate for planning, conducting, and reporting research.

#### **OVERALL COURSE GOALS**

1. Alleviate any fear of research.
2. Teach students to conduct research.
3. Teach students to consumer research.

#### **LESSON OBJECTIVES BY UNIT**

##### **UNIT I: The Research Process**

The students will be able to:

1. Define research: process and product (ends sought).
2. Discuss the characteristics of research.
3. List and define the types of research; identify studies by purpose and type.
4. Compare problem solving and the research process.
5. Describe the sources of knowledge; define each.

## **UNIT II: The Research Proposal**

The students will be able to:

1. List and describe the chapters and subsections of a research proposal (for thesis, dissertation or funding) and a research report in their proper order.
2. Describe the characteristics of an appropriate title.
3. Compare and contrast the styles appropriate for  
(1) a dissertation or thesis, (2) a research proposal, (3) a research report,  
(4) a professional paper, and (5) a journal article.
4. Distinguish (compare and contrast) among assumptions, limitations, and hypotheses.

## **UNIT III: Selecting and Defining the Problem**

The student will be able to:

1. Describe three sources of research problems.
2. Describe factors to consider in choosing a problem.
3. Describe the process of developing a problem statement.
4. List the characteristics of properly stated problems.
5. Define related terminology.
6. List and define the types of independent variables.
7. Select independent and dependent variables from problem statements.
8. Write problem statements possessing the necessary characteristics.
9. Distinguish between independent variables and levels of independent variables.

## **UNIT IV: Obtaining Knowledge and Information—Reporting Related Literature**

The student will be able to:

1. Describe objective reporting.
2. Compare and contrast findings, conclusions, and implications.
3. List factors used to describe the research of others in citing the work.
4. Discuss the role of related research in a research project.
5. Describe a good note-taking procedure.
6. Define a theory, a concept and a construct.
7. Describe the types of theories.
8. Describe the functions of theories.
9. Compare facts and theory.

10. Identify sources of related literature.
11. Make appropriate citations and bibliographic entries in a research report.

### **UNIT V: Objectives and Hypotheses**

The student will be able to:

1. Write research objectives for survey, ex post facto, and experimental research.
2. Evaluate objectives for appropriate content criteria.
3. Develop a hypothesis.
4. Describe the relationship of theory to hypothesis development.
5. Discuss the testing of hypotheses.
6. Write null and alternative hypotheses for statistical testing.

### **UNIT VI: Descriptive Research**

The student will be able to:

1. Describe the types of research regarding:
  - A. Purpose of each type.
  - B. Nature of independent variables.
  - C. Examples of each type.
  - D. Limitations or shortcomings of each type.
2. Describe the characteristics of survey research.
3. Outline and define the elements of the sampling process.
4. Outline a flow chart for direct (census) and indirect route (sample survey) inference, and define each element.
5. Evaluate survey research.
6. Outline the recommended steps in conducting a survey by mail.
7. List and define each error to survey research and describe how to control each error.

### **UNIT VII: Correlational and Ex Post Facto Research**

The student will be able to:

1. Describe the features and limitations of ex post facto and relational research.
2. Describe how to control extraneous variables in relational research.
3. Describe the two questions to be addressed by relational studies.

## **UNIT VIII: Experimental and Quasi-experimental Research**

The student will be able to:

1. For each threat to the internal and external validity of a study:
  - A. Define the threat and give an example of how it could occur.
  - B. Describe how to control each threat.
  - C. Identify threats in studies.
2. Define internal and external validity.
3. Identify, describe, and compare/contrast the pre-experimental, true experimental, and quasi-experimental designs discussed in class.
4. Select the most appropriate design for a study.
5. Describe the threats to validity of a design in class/via examinations/ in Chapter 3 (Methods) of a research proposal.

## **Unit IX: Data Analysis**

The student will be able to:

1. Choose appropriate Descriptive Statistics, Correlations and Inferential Statistics tools to do data analysis.

## **Unit X: Critiquing Research Articles**

The student will be able to:

1. Use the knowledge they have learned in this course to critique any research articles in social sciences

## **Evidence Used to Determine Course Grade**

The grade the students receive in this course will be based upon the following criteria:

### **CRITERIA:**

Required Percentage (Total 100%)

1. Mid Term Exam 30%
2. Final Exam 30%
3. Critiquing Research Articles 20%
4. Quiz, Attendance, Learning Attitude, and Participation 20%

**PS:** Students, who find they are unable to be at an examination session because of illness, extenuating circumstances, etc., should contact the instructor as soon as the

condition becomes apparent. Extensions will be arranged where fair and practical within university guidelines. Grades are determined by performance on the listed requirement and no additional activities are available to earn other grade.

Academic misconduct of any kind will not be tolerated. If students have questions about what activities constitute academic misconduct and what procedures are followed, they should consult with the instructor.

Reference: The handouts provided by the instructor.

## **CRITIQUING RESEARCH ARTICLES**

Use these questions for all article critiques. Number and answer item-by-item; not in prose form. Answer the following questions yes or no and explain your answer!

I. What type of research most accurately describes this study?

### **II. THE PROBLEM**

1. Was the problem clearly defined?
2. Were hypotheses, research questions, or objectives stated?
3. Was the problem logically deduced from some theory?
4. What is (are) the independent variable(s)?
5. What is (are) the dependent variable(s)?

### **III. THE DESIGN**

1. Was an appropriate research design utilized to answer the problem?
2. Was the population studied clearly specified?
3. Were the sampling methods clearly outlined?
4. Was a control or comparison group chosen in the same manner and from the same population as the sample?
5. Were the treatments randomly assigned to the groups?
6. Did the study include a replication?
7. Was the alpha level specified a priori?

### **IV. THE PROCEDURE**

1. Were treatments and/or data collecting methods described so that you could replicate the study?
2. Were the size and characteristics of the sample adequately described?
3. Were the treatments administered so that extraneous sources of error were either held constant for all groups or randomized among subjects within all groups?

## V. THE MEASUREMENT

1. Was any evidence of the reliability of the measurements given?
2. Was any evidence of the validity of the measurements given?

## VI. THE INTERPRETATION

1. Were the conclusions consistent with the obtained results?
2. Were the generalizations confined to the population from which the sample was drawn?

## VII. GENERAL

1. Was this an important study? Why? (Your opinion).