I. COURSE PURPOSE

This course is designed to give foundation level graduate social work students a basic understanding of the research process and statistical methods used by social workers and other social scientists. The course content is rooted in the Code of Ethics of the National Association of Social Workers placing emphasis on the appropriate professional ethical conduct in engaging in research including confidentiality, privacy, informed consent, and sensitivity to diversity in all research activities. Particular attention is given to research addressing various diverse groups and populations at risk. Throughout the first half of the course, student critical thinking is fostered as students engage in the development and writing of their own research proposal while increasing their knowledge of the theoretical perspectives guiding their research, hypothesis testing, the application of research methodology, and making inferences about causality. During the second half, student methodological competence is further strengthened by increasing their knowledge of various statistical techniques and engagement in various practice exercises and assignments covering statistics used for describing sampled participants, and for inference, including mean comparisons using t tests and analysis of variance, bivariate relationships using correlation, and frequency associations using chi square. Although some focus is devoted to increasing student competence in understanding the calculation approach for each statistical technique, primary focus is devoted to strengthening student ability in applying and interpreting statistical tests.
II. EDUCATIONAL OBJECTIVES

Upon completion of this course students will be able to:

1. Formulate a research problem;
2. Identify a theoretical perspective underpinning the research problem;
3. Formulate a research question and testable hypothesis;
4. Identify independent and dependent variables and levels of measurement;
5. Distinguish between reliability and validity of measures or instruments;
6. Develop probability and non-probability sampling plans;
7. Describe and distinguish between non-experimental and experimental group designs;
8. Identify and critique threats to internal and external validity of designs;
9. Identify and address research issues that should be considered when conducting research with diverse and vulnerable populations including children, pregnant women, incarcerated or mandated clients, persons affected by cognitive disabilities, members of minority groups, and any research participants who may be different from the researcher;
10. Identify ways to protect at-risk populations when conducting research;
11. Identify and address ethical issues arising during conduct of social work research;
12. Select appropriate statistical techniques for specific research questions;
13. Interpret results of various statistical techniques.

III. COURSE REQUIREMENTS

A. Required Texts


B. Other Recommended Resources and Media

Engel, R. J., & Schutt, R. K. (2010). Student study site for *The Practice of Research in Social Work*, 3rd edition: [http://www.sagepub.com/engelprsw3e/study/resources.htm](http://www.sagepub.com/engelprsw3e/study/resources.htm)


Revised 12-17-12
C. **Course Assignments**

**Assignment 1**: Midterm Exam – This exam will focus on material on research methods covered during the first half of class (classes #1 to #6). **In class - Class 7**

**Assignment 2**: Problem Formulation Paper – Students will develop a brief, scholarly paper that contains the initial elements of a research proposal. Specific instructions for this assignment will be distributed by the instructor. **Due Class 8**

**Assignment 3**: Data Analysis Assignment – Students will respond to a data analysis assignment that allows them to demonstrate their understanding of descriptive statistics (classes #8 & #9). **Due Class 11**

**Assignment 4**: Final Exam – This exam will focus on material covered on hypothesis testing and bivariate statistics (classes #10 to #13). **In class – Date determined by Final Exam schedule**

**Note**: Throughout the course, the instructor may also utilize un-graded exercises for class practice or homework in order to strengthen student knowledge and skills.

D. **Grading Policy**

All written assignments are to be typed, double spaced, and adhere to APA (6th ed.) writing/formatting style. Please note that full credit will not be given for any assignments which are submitted late. No assignment will be accepted after it has been reviewed in class. Grades are based on the University grading system as described in the *Graduate Announcements*. Each written assignment (1 & 3) and examination (mid-term, final) is worth 25% of the total grade.

- Midterm Exam 25%
- Problem Formulation Paper 25%
- Data Analysis Assignment 25%
- Final Exam 25%

E. **Student Attendance, Preparation, and Participation**

Students are required to attend classes and are expected to participate meaningfully in class discussions and exercises. Different students are expected to make different kinds of contributions. For example, some students will have an easy time with spontaneous interactions while others will be more comfortable making planned statements about key ideas from the readings or other sources. Both types of contributions are valued. It is also expected that each student will complete the readings indicated in the course outline.
F. Course and Instructor Evaluation

NCSSS requires electronic evaluation of this course and the instructor. At the end of the semester, the evaluation form may be accessed at http://evaluations.cua.edu/evaluations using your CUA username and password. Additional informal written or verbal feedback to the instructor during the semester is encouraged and attempts will be made to respond to requests.

G. CLASS EXPECTATIONS

1. Scholastic Expectations
   Please refer to NCSSS Announcements or the appropriate Program Handbook for Academic Requirements, which include scholastic and behavioral requirements. All written work should reflect the original thinking of the writer, cite references where material is quoted or adapted from existing sources, adhere to APA (6th ed.) format, and should be carefully proofread by the student before submission to the instructor for grading. Please be aware that writing mechanics and APA errors are considered in determining a grade for assignments.

2. Academic Honesty
   Joining the community of scholars at CUA entails accepting the standards, living by those standards, and upholding them. Please refer to the University Policy and appropriate Program Handbooks.

3. Accommodations
   Students with physical, emotional, learning, and other disabilities wishing to request accommodations must identify with Disability Support Services (DSS) at CUA and submit documentation. If you have documented such a disability to DSS and you require accommodations or an academic adjustment, please arrange a meeting with the course instructor as soon as possible to discuss these accommodations. Contact information for DSS: phone: 202-319-5211; website: http://disabilityservices.cua.edu/.
## CLASS SCHEDULE

<table>
<thead>
<tr>
<th>Class</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td><strong>Introduction to Research in Social Work Practice</strong></td>
</tr>
<tr>
<td></td>
<td>1. Sources of knowledge</td>
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<tr>
<td></td>
<td>2. Reasons for social work research</td>
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<td></td>
<td>3. Quantitative and qualitative approaches</td>
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<td>4. Research roles</td>
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<td>5. Ethical issues and professional responsibility</td>
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</tbody>
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**Required Reading**  

**Recommended Readings:**  

2  
**Exploration of Research Approaches**  
1. Literature review  
2. Quantitative and qualitative approaches  
3. Sensitivity to gender, and ethnic/cultural issues in research  
4. Formulation of research questions and hypotheses  
5. Identification of variables  

**Required Reading**  

**Recommended Readings:**  
Class | Topic
--- | ---
3 | Measurement
  1. Functions of measurement
  2. Conceptualization and operationalization of variables
  3. Levels of measurement
  4. Evaluating validity and reliability
  5. Standardized measurement instruments

**Required Reading**
Engel & Schutt (2013): Chapter 4, Measurement

**Recommended Readings:**

4 | Sampling
  1. Sampling strategies
  2. Types of probability samples
  3. Types of non-probability samples

**Required Reading**
Engel & Schutt (2013): Chapter 5, Sampling

**Recommended Readings:**

5 | Causality and Research Designs I
  1. Criteria for causal explanation
  2. Group experimental designs
  3. Ideal Experiment

**Required Reading**
Engel & Schutt (2013): Chapter 6, Causation and Research Designs

**Recommended Readings:**
Class | Topic
--- | ---
6 | **Causality and Research Designs II**
   1. Threats to internal validity of designs
   2. Threats to external validity of designs
   3. How to strengthen internal or external validity in design

**Required Reading**
Engel & Schutt (2013): Chapter 7, Experimental Designs

*Recommended Readings: TBA*

7 | **MID-TERM EXAMINATION-In Class**

8 | **Descriptive Statistics**
   1. Descriptive vs. inferential statistics
   2. Frequency distributions and percentages
   3. Graphs

**Required Reading**
Weinbach & Grinnell (2007): Chapter 1, Introduction to Statistical Analysis and
Chapter 2, Frequency Distributions and Graphs

*Recommended Readings:*

**DUE: Problem Formulation Paper**

9 | **Descriptive Statistics, continued**
   1. Measures of central tendency
   2. Measures of dispersion
   3. The normal distribution
   4. $z$-scores and percentiles

**Required Reading**
Weinbach & Grinnell (2010): Chapter 3, Measures of Central Tendency and
Variability and Chapter 4, Normal Distributions

*Recommended Readings:*
Dozier, M., & Lindheim, O. (2006). This is my child: Difference among foster parents
### Class 10  
**Hypothesis Testing**
- Formulating hypotheses
  1. The logic of probability
  2. Significance level
  3. Substantive vs. statistical significance

**Required Reading**
Weinbach & Grinnell (2010): Chapter 5, Hypothesis Testing: Basic Principles and Chapter 6, Sampling Distributions, Rejection Regions, and Statistical Test Selection

**Recommended Readings:**

**Data Analysis Instructions distributed by instructor.**

### Class 11  
**Testing for Difference of Means**
- The logic of mean comparisons
- *t*-test for one sample, and independent and dependent samples
- One-way analysis of variance

**Required Reading**
Weinbach & Grinnell (2010): Chapter 7, *t* tests and Analysis of Variance

**Recommended Readings:**

**DUE – Data Analysis Assignment**
<table>
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<tr>
<th>Class</th>
<th>Topic</th>
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<tbody>
<tr>
<td><strong>12</strong></td>
<td>Testing for Associations</td>
</tr>
<tr>
<td>1.</td>
<td>The logic of chi-square test</td>
</tr>
<tr>
<td>2.</td>
<td>Expected vs. observed frequencies; cross-tabulation tables</td>
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</tbody>
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**Required Reading**
Weinbach & Grinnell (2010): Chapter 8, The Chi-Square Test of Association between Variables

*Recommended Readings:*

<table>
<thead>
<tr>
<th><strong>13</strong></th>
<th>Testing for Linear Relationships</th>
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<tbody>
<tr>
<td>1.</td>
<td>Logic of bivariate correlational research</td>
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<tr>
<td>2.</td>
<td>Pearson r correlation coefficient</td>
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<td>3.</td>
<td>Strength of the correlational relationship</td>
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**Required Reading**
Weinbach & Grinnell (2010): Chapter 9, Correlation Analysis

*Recommended Readings:*

**14** | Last Class |
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<tr>
<td>Preparation for the final examination.</td>
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**FINAL EXAMINATION – date/time will be announced by the instructor.**