I. COURSE PURPOSE

This course is designed to give foundation level graduate students in social work a basic understanding of the research methods and statistical analysis used by social workers and other social scientists. The major goals of the course are to: (a) enhance students’ abilities to be critical consumers of the professional knowledge base, (b) increase students’ competence in research literacy, (c) build appreciation of the different ways research development and translation of research findings create evidence for practice and policies that underpin human services with diverse populations, and (c) provide a foundation for more advanced knowledge and skill development during concentration research coursework. In the first half of the course, students’ critical thinking is fostered by developing the knowledge and skills required to understand and evaluate various stages of the research process used for developing a scientific study, including problem formulation, research questions and hypotheses, variable measurement, design, sampling, and data collection. During the second half of the course, student competence is further strengthened through building knowledge and skills in data analysis, with an emphasis on understanding the purpose of various statistical techniques and developing the capacity to interpret and identify implications of statistical results. The course concludes with attention to various approaches to dissemination of research findings in order to better inform social work practice. The overall course content is grounded in the Code of Ethics of the National Association of Social Workers, placing emphasis on the appropriate professional ethical conduct in engaging in research, and on sensitivity to issues of diversity in all phases of the research process.
II. COMPETENCIES AND PRACTICE BEHAVIORS

The Council on Social Work Education (CSWE), requires that students meet 10 core competencies (for 1-Professional identity, 2-Ethical practice, 3-Critical thinking, 4-Diversity in practice, 5-Human rights & justice, 6-Research based practice, 7-Human behavior, 8-Policy practice, 9-Practice contexts, and 10-Engagement, assessment, intervention, evaluation), which are operationalized as practice behaviors. Each course is designed to cover one or more of the 10 core competencies and each course is also designed to cover some, but not all of the practice behaviors within a competency. Upon completion of this course, students will able to demonstrate the following practice behaviors within the noted competencies:

<table>
<thead>
<tr>
<th>Selected Primary Competencies Addressed in SSS 590</th>
<th>Practice Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Ethical Practice: Apply social work ethical principles to guide clinical practice.</td>
<td>1. Social workers recognize and manage personal biases in practice settings.</td>
</tr>
<tr>
<td>3. Critical Thinking: Apply critical thinking to inform and communicate clinical judgments.</td>
<td>1. Social workers engage in reflective practice 2. Social workers evaluate the strengths and weaknesses of multiple theoretical perspectives and differentially apply them to client situations.</td>
</tr>
<tr>
<td>4. Diversity in Practice</td>
<td>1. Social workers use their self-awareness to understand the influence of their personal biases and values in working with others.</td>
</tr>
<tr>
<td>6. Research Based Practice: Engage in research-informed practice and practice-informed research.</td>
<td>1. Social workers critically evaluate and utilize theoretical models and empirical research methods for the purpose of informing and evaluating social work practice and programs.</td>
</tr>
<tr>
<td>7. Human Behavior: Apply knowledge of human behavior and the social environment.</td>
<td>1. Social workers differentially apply theories of human behavior that address the bio-psycho-social-spiritual nature of clients and the social environment to guide social work practice.</td>
</tr>
<tr>
<td>9. Practice Contexts: Respond to contexts that shape clinical practice.</td>
<td>1. Social workers assess the current political, economic, social, and cultural climate as it affects the most vulnerable members of society. 2. Social workers intervene through advocacy to serve the most vulnerable persons within the political, economic, social, and cultural contexts.</td>
</tr>
<tr>
<td>10. Engage, Assess, Intervene, and Evaluate: Engage, assess, and intervene with individuals, families, and groups.</td>
<td>1. Use empathy, active listening, and other clinical skills to establish rapport in order to set treatment goals with clients 2. Develop culturally responsive therapeutic relationships 3. Attend to the interpersonal dynamics and contextual factors that both strengthen and potentially threaten the therapeutic alliance. 4. Develop, with clients, an intervention plan that incorporates client strengths, capacities, and protective factors. 5. Develop, with clients, an intervention plan that incorporates client strengths, capacities, and protective factors. 6. Critically analyze, monitor, and evaluate interventions and program implementation and outcomes.</td>
</tr>
</tbody>
</table>

Updated: 12.9.2014 Farber
III. ADDITIONAL EDUCATIONAL COURSE OBJECTIVES

1. Identify potential ethical and/or diversity issues in each phase of the research process;
2. Articulate the role of research in informing social work practice;
3. Recognize major differences in the research process between quantitative and qualitative studies;
4. Articulate strengths and weaknesses of different study designs based on group-based methodology;
5. Read and interpret statistical results of various types of studies with various common research designs using group-based methodology.

Assignments are structured in ways that upon completion of this course student will be able to:

1. Formulate a research problem pertaining to population need;
2. Identify conceptual or theoretical perspective underpinning the research problem;
3. Formulate a research question and testable hypothesis;
4. Distinguish between independent (antecedent) and dependent (criterion) variables, and levels of variable measurement;
5. Distinguish between reliability and validity of measures, scales, or instruments;
6. Distinguish probability and non-probability sample selection of study participants;
7. Describe and distinguish between different methodological group-based designs;
8. Identify and critique strengths and weaknesses to internal and external validity in different group-based designs;
9. Recognize and describe ethical issues pertaining to ethical conduct of research with different populations;
10. Recognize and describe ways to protect at-risk and vulnerable populations when conducting research;
11. Recognize and distinguish common statistical techniques used for investigating different kinds of research questions;
12. 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

Updated: 12.9.2014 Farber
C. **Structure of Course Assignments**
To submit quizzes, exams, and assignments, always access CUA-based Blackboard (BB). Due dates are always by “midnight, or 11:59pm” on the specified date unless indicated by the instructor. **Please use only Firefox, Google Chrome, or Safari to access BB!** That also means that when you are working at a computer that shows the “explorer” icon on the desktop – you need to make sure that this icon is specifically for the Firefox, or Google Chrome, or Safari web browser, and not for the general Microsoft explorer (which can compromise the display of BB contents).

**Quizzes** - Blackboard (BB) based short quizzes are used to assess students’ progress in research literacy, problem solving, and knowledge of selected research concepts throughout the entire course. Each quiz can be taken from a student’s personal laptop by using the CUA student login and password, used for BB access. The quizzes are posted on BB under the “Assignments” link, and remain open for a specified time period (around 5 days). The time frame differs for each section! The specific schedule dates are provided further on the syllabus. Once the quiz is accessed, it must be completed within the specified period, and students get two tries for access. The student also gets to see all the questions on the entire quiz at once.

**Midterm Exam** – This comprehensive, problem solving exam focuses on the knowledge of contents and skills acquired during the first half of course. Typically, it covers classes one through eight that primarily focus on methodology of research. Some of the questions may also be drawn from the previous quizzes. All sections take the exam on BB during the same week, after Spring Break; the exam stays open for one week, and is timed for 2 hours, with 2 tries for access. **This time**, students get to see only one question at a time.

**Student Project** – Students form small teams (2-3-4 pending class size), and develop a scholarly research proposal (paper) for a quantitative research study that focuses primarily on the introductory parts of the study. That is, students select, define, and provide research information on a specific identifiable population need, social concern, or problem that is relevant for social work investigation, develop a literature review of the research evidence that pertains to the selected problem in such a way as to justify the purpose of the study, and the proposed research question and hypothesis.

Within this discussion, students also provide the theoretical rationale for their study. They identify and define major variables, and explain the measurement of the variables. The research question and hypothesis are expected to include at least two variables that can be distinguished as independent and dependent variables. At least one variable needs to be measured at interval or ratio level of measurement, and be able to be measured by a tool/scale for which information on the tool’s reliability and validity can provided. The paper concludes with discussion on the ethical conduct that would be used in carrying out this study.

(a) Each team will upload their completed paper to BB on the date of the last class.
(b) Each team will develop a short presentation (10 min. maximum) that will be

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presented during “final university exam week.”
(c) A guide for this project paper will be posted on BB.
(d) The scholarly paper is expected to be 8-10 pages in length, typed and organized in a scholarly (formal) manner, double spaced, referenced, and adhere to APA (6th ed.) style.
(e) To assure appropriate level of engagement and progress on the project, students provide four brief progress notes during the semester (that count as 10% of their grade in class engagement):

1. Progress Note 1 – Class 3: Upload to BB: One page that provide a brief (a) explanation/summary of the problem area, (b) its relevance to social work, (c) identifies the targeted population in the context of this problem, and (d) provide at least two different sources (references) for documenting information on the prevalence or severity of the problem area.

2. Progress Note 2 – Class 6: Upload to BB: One page that provides information on (a) the selected research question for the targeted population, and (b) identifies key variables in the study.

3. Progress Note 3 – Class 8: Upload to BB: One page that provides (a) short review of 4 research studies that are relevant to your selected problem area, and the variables that you selected to study, and (b) identifies the theory or theoretical underpinning for your study, and that gives a very brief sense as to why this theory is relevant to your study.

4. Progress Note 4 – Class 11: Upload to BB: One page that identifies at least one numeric variable, and its measurement tool, with at least one reference on this tool.

D. Grading Policy
Please note that full credit will not be given for any assignment/quiz that is submitted late. Some quizzes may be reviewed in class; some will provide immediate feedback upon completion through BB. No assignment/quiz will be accepted after it has been reviewed in class. Grades are based on the University grading system as described in the Graduate Announcements.

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Quizzes (9 at 5% each)</td>
<td>45%</td>
</tr>
<tr>
<td>Midterm</td>
<td>20%</td>
</tr>
<tr>
<td>Project paper</td>
<td>25%</td>
</tr>
<tr>
<td>Project paper presentation</td>
<td>5%</td>
</tr>
<tr>
<td>Class engagement</td>
<td>5%</td>
</tr>
<tr>
<td>Total Grade</td>
<td>100%</td>
</tr>
</tbody>
</table>

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

Scholastic Expectations
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 edition format for scholarly writing and referencing, and be carefully proofread before submission for grading.

For support with scholarly writing, please consider using the CUA Writing Center (http://success.cua.edu/appointments/wc-appointment.cfm): appointment can be made at (202) 319-4286 or by email at cua-writingcenter@cua.edu.

Class Absence: It is recognized that a time may arise such that a student may be unable to attend class. For any planned or unplanned absences, please make sure that you apprise the instructor in writing (email) and or in person of your circumstances as soon as possible. Please be aware that more than one absence jeopardizes your ability to successfully complete the course. Please be also aware that “unexpected” absence due to work/employment (paid or unpaid) related tasks or travel is not considered an acceptable excuse and may also jeopardize your course participation.

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.

Confidentiality
Each student is expected to adhere to the Confidentiality Agreement that is signed at the beginning of every semester. This agreement covers discussion and presentations of “practice materials” in classes, supervisory sessions, case conferences, seminars, and other educational settings within the NCSSS BSW or MSW programs that are for professional learning purposes only, and are subject to strict professional standards of confidentiality. These same standards of confidentiality also extend to various forms of written communication and peer consultation. Adherence to these standards means all students refrain from communicating beyond the classroom setting about practice material that is presented in class. Students will also refrain from using social media outlets (blogs, twitter, Facebook, etc.) or email to discuss or post information on practice settings, program responsibilities and projects with individuals who are not in teaching or supervision roles directly related to the situation.

Accommodations
CUA is committed to promoting the full participation of all qualified students with disabilities
in all aspects of campus life. Students with disabilities are required to meet the same academic standards as other students at the university. It is only through a student's voluntary disclosure of their disability and request for accommodations that CUA can support disability needs. Students who have a disability and wish to make a request for accommodations must do so first through Disability Support Services (DSS) (For appointment call (202) 319-5211 and see Student Life Disability Services Policies, Procedures, and Services at http://policies.cua.edu/studentlife/disabilitysvcs/disabilityfull.cfm Once eligibility is determined at CUA DSS, based on the submitted documentation, appropriate accommodations are arranged. Accommodations are determined on a case-by-case basis. Please be aware that you are expected to present documentation for accommodations to your instructor and arrange a meeting as soon as possible to discuss these accommodations.

Student Support
For support with searching for peer reviewed research and other related professional literature and their sources, students may make an appointment with a library coordinator: Ms. Mary Agnes Thompson at: 202-319-6421, thompsom@cua.edu.

For support with scholarly writing, students may contact the CUA Writing Center at 202-319-4286 or at the website: http://english.cua.edu/wc/.

For support with CUA BlackBoard, contact CUA Help desk 202-319-4357. Most materials pertaining to course content will be placed on CUA Blackboard.

Instructions for Blackboard (BB) access:
Use only web-browsers: Firefox, Google Chrome, Safari

Step 1: Start with https://blackboard.cua.edu/
Step 2: Login using your CUA username and password
Step 3: Enter Course SSS 590

On BB - Please notice that on the left of your BB display “Documents” will contain relevant information for class contents in separated class folders, and “Assignments” will include information on all assignments. Please also note that you are expected to electronically upload to BB all assignments by “midnight or 11:59pm” unless specified by the instructor.
CLASS SCHEDULE

CLASS 1  INTRODUCTION TO RESEARCH IN SOCIAL WORK PRACTICE

Mo: 1-13  Syllabus and overview of the course, textbooks, assignments, and Blackboard use
Th:  1-15  Sources of knowledge and errors in reasoning
Sat: 1-17  Scientific approach and components of a quantitative scientific study
          Social work research and evidence-based practice
          Types of social work research: descriptive, exploratory, explanatory, and evaluative
          Validity in a study: measurement validity, casual design validity, and sample
          Basic structure of qualitative study and quantitative study
          Levels of research evidence in a study used for evidence-based practice

Required Reading:
Engel & Schutt: Chapter 1 - Science, society, and social work research

Articles:


Class Exercise: Differentiating types of studies

CLASS 2  PROBLEM FORMULATIONS AND BEGINNING RESEARCH

Mo: 1-12  Who to study, what to study, and how to study the “social issue”
Th:  1-22  Components of a scientific study
Sat: 1-24  Research questions: Feasibility, social importance, scientific relevance, and population diversity, and how to write them
          Finding information, doing literature review, and synthesizing information
          Role of theory in inductive and deductive approach to research
          From research questions to hypotheses (null, non-directional, and directional)
          Variables in a study: independent and dependent variables
          Direction of a relationship between two variables

Required Reading:
Engel & Schutt: Chapter 2 - The process and problem of social work research
Salkind: Chapter 7 - Hypotheticals and you, testing your questions

Updated: 12.9.2014 Farber
Articles:

Class Exercise: Practicing research questions, hypotheses, and identification of independent and dependent variables

Quiz 1:  BB Opens 8am – closes 11:59pm
Monday  Section  1-27 to 1-31
Thursday Section 1-23 to 1-27
Saturday Section 1-25 to 1-29

CLASS 3  ETHICAL CONDUCT IN RESEARCH

Mo: 2-22  Ethical principles: Respect for persons, Beneficence, Justice
Th: 1-29  Application of ethical principles: Informed consent (assent), assessment of risk
Sat: 1-31 and benefit, and selection of participants
Protection of participants from harm: vulnerable and diverse populations
Differentiating privacy and confidentiality
Function of Institutional Review Boards (IRB)
Guidelines for social work research

Required Reading:
Engel & Schutt: Chapter 3 - Ethical and Scientific Guidelines for Social Work Research.

Articles:


Class Exercise: Differentiating components of Informed Consent.

Quiz 2:  BB Opens 8am – closes 11:59pm
Monday  Section  2-3 to 2-7
Thursday Section 1-30 to 2-3
Saturday Section 2-1 to 2-5

**Project Progress Note 1 – post on BB

Updated: 12.9.2014 Farber
CLASS 4   MEASUREMENT AND INSTRUMENTATION

Mo: 2-9   Functions of measurement and measurement error
Th: 2-5   Conceptualization and operationalization of variables
Sat: 2-7   Levels of variable measurement
Data gathering: self-reports, obtrusive and unobtrusive observations
Type of instruments and evaluating their validity and reliability
Standardized measurement instruments and normative information
Translation of instruments with diverse populations
Data collection: pencil and paper, and electronic media
Measurement error
Implications for evidence-based practice

Required Reading:
Engel & Schutt: Chapter 4 – Measurement; Chapter 9 – Translating instruments (pp. 263-265)

Recommended Readings:
Salkind: Chapter 6 – Just the truth, an introduction to understanding reliability and validity (and how they are typically computed)


Articles:


Class Exercise: Differentiating levels of variable measurement, and reliability and validity of instruments

Quiz 3:   BB Opens 8am – closes 11:59pm
Monday Section 2-10 to 2-14
Thursday Section 2-6 to 2-10
Saturday Section 2-8 to 2-12

CLASS 5   SAMPLING STRATEGIES FOR PARTICIPANT SELECTION

Mo: 2-16   Sample vs. population
Th: 2-12   Components of a sample
Sat: 2-14   Sampling frame and sample size

Updated: 12.9.2014 Farber
Selection strategies and generalizability
Probability sampling selection
Non-probability sampling selection
Recruitment strategies with diverse populations
Implications for evidence-based practice

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

**Articles:**

**Class Exercise:** Sample components and differentiating sampling strategies

**Quiz 4:**  
**BB Opens 8am – closes 11:59pm**
Monday Section 2-17 to 2-21
Thursday Section 2-13 to 2-17
Saturday Section 2-15 to 2-19

**CLASS 6 CAUSALITY AND RESEARCH DESIGNS I**

Mo: 2-23 Causal nomothetic and idiographic explanations
Th: 2-19 Criteria for causal explanation: association, time-order, spuriousness
Sat: 2-21 Criteria for causal explanation in group-based research designs
Cross-sectional and longitudinal trend, panel, cohort studies
Units of observation and errors in reasoning
Implications for evidence-based practice

**Required Reading:**
Engel & Schutt (2013): Chapter 6 - Causation and Research Design

**Articles:**


Updated: 12.9.2014 Farber
with an exposure therapy for post-traumatic stress disorder and depression in survivors of the 2004 South-East Asia tsunami. *Acta Psychiatr...*, 121(4), 289-300. (Example of non-random comparison of three groups)

**Class Exercise:** Differentiating units of observations

**Student project - Progress Note 2 post on BB**

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**CLASS 7**

**GROUP BASED DESIGNS AND STRENGTHS AND WEAKNESSES**

**Tu: 2-24**

Non-experiments: Ex post facto survey and one pre-post group designs

**Th: 2-26**

Two non-equivalent quasi-experimental groups

**Sat: 2-28**

Classic experiment - experimental and control groups

Other types of true experiments and Solomon’s 4

Randomization and pre-post-testing

Advantages and threats in different designs

Threats to internal and external validity

Ethical issues in experiments: random assignment, deception, and selective distribution of benefits

**Note:** Monday class meets for university “Administrative Monday.”

**Required Reading:**
Engel & Schutt: Chapter 7 – Group experimental designs

**Articles:**

**Class Exercise:** Differentiating designs and recognizing their strengths and weaknesses

**Quiz 5:**

BB Opens 8am – closes 11:59pm

Monday Section 2-25 to 3-1

Thursday Section 2-27 to 3-3

Saturday Section 3-1 to 3-5

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**CLASS 8**

**SURVEYS AND QUALITATIVE METHODS**

**Mo: 3-2**

Surveys: mail, group administered, telephone, in-person interview, web-based

**Th: 3-5**

Measurement errors associated with surveys and their questions

**Sat: 3-7**

Fundamentals of qualitative studies

Participant observations, intensive interviewing, focus groups

Updated: 12.9.2014 Farber
**Required Reading:**
Engel & Schutt: Chapter 9 – Survey research; Chapter 10 – Qualitative methods: Observing, participating, listening

**Articles:**


**Class Exercise:** Differentiating survey questions

**Student Project – Progress Note 3**

**SPRING BREAK RECESS: 3-9 TO 3-13**

**MIDTERM EXAM** (Class contents 1-8)
All sections take this exam during 3-16 to 3-22 on BB

**CLASS 9 ** **DESCRIPTIVE STATISTICS**

**Mo:** 3-16 Descriptive statistics, application, interpretation
**Th:** 3-19 Measures of central tendency: mean, median, mode
**Sat:** 3-21 Measures of variability: range, variance, standard deviation
Basic graphs: Bar chart, histogram, pie chart, line graph

**Required Reading:**
Salkind: Chapter 1 – Statistics vs. sadistics (including 1a and 1b); Chapter 2 – Sigma Freud and descriptive statistics; Chapter 3 – Vive la difference, understanding variability; Chapter 4 – A picture really is worth a thousand words

**Article:**

**Class Exercise:** Practicing descriptive statistics

Updated: 12.9.2014 Farber
CLASS 10  RULES OF NORMAL DISTRIBUTION FOR SAMPLE INFERENCE

Mo: 3-23  Probability and normal distribution of scores – why does it matter
Th:  3-26  Proportions of bell curve and how to use them for understanding sample scores
Sat:  3-28  Z-scores for understanding sample distribution scores
Figuring out percentiles using rules of normal distribution or z-scores

Required Reading:
Salkind: Chapter 8 – Are your curve normal, probability and why it counts

Articles:


Class Exercise: Application of normal distribution concepts, figuring out percentiles, and using z-scores.

** NOTE: SPRING 2015 FOUNDATION COMPS (TH, 3-26 – MO, 3-30)

CLASS 11  HYPOTHESIS TESTING, STATISTICAL SIGNIFICANCE, AND COMPARING A SAMPLE MEAN WITH POPULATION MEAN

Mo: 3-30  Principles of hypothesis testing: null hypothesis and type 1 and 2 errors
Th:  4-9**  Statistical significance and the p-value
Sat:  4-11  Understanding p < 0.05 using principles for comparing obtained test values and critical table values
Z-test: the hypothesis process, testing analysis, and comparing sample and population means, obtaining results at p-value, interpreting statistical significance, and drawing substantive study conclusions
One-sample t-test and it use, and interpretation

** Note:  Thursday class has shifted because Holy Thursday is on 4/2

Required Reading:
Salkind: Chapter 9 – Significantly significant, what it means for you and me; Chapter 10 – Only the lonely, the one sample z-test
Class Exercise: Differentiating results using the Z-test and one sample t-test, including statistical significance, and types of errors.

Quiz 6: BB Opens 8am – closes 11:59pm
Monday Section 3-31 to 4-4
Thursday Section 4-10 to 4-14
Saturday Section 4-12 to 4-16

** Student Project – Progress Note 4

NOTE: Holy Thursday and Easter Holidays: Th, 4/2 through Mo, 4/6 in 2015

CLASS 12 COMPARING 2 OR 3 OR MORE GROUP MEANS

Mo: 4-13** Two independent samples t-test
Th: 4-16 Two dependent (repeated) samples t-test
Sat: 4-18 Logic of analysis of variance (ANOVA) tests and interpretation
Logic of repeated measures in ANOVA and interpretation

**Note: Monday class date has shifted due to Easter holidays

Required Reading:
Salkind: Chapter 11 – t(ea) for two, tests between the means of different groups; Chapter 12 - t(ea) for two (again), means of related groups; Chapter 13 – Two groups too many, try analysis of variance; Chapter 14 – Two too many factors, factorial analysis of variance. Brief introduction.

Articles:


Class Exercise: Problem solving and interpreting t-tests and various analysis of variance results.
**CLASS 13**  
**PRINCIPLES OF CORRELATION, REGRESSION, AND ODDS**

**Mo: 4-20**  
Linear relationship in bivariate correlations and interpretation of p-value,

**Th: 4-23**  
direction, common language meaning, magnitude, r-square and shared variance

**Sat: 4-25**  
Pearson and Spearman correlation coefficients  
Logic of prediction and simple regression, and interpretation  
Reading results from multiple regression analysis (MRA)  
Reading results from logistic regression and interpreting odds ratios

**Required Reading:**
Salkind: Chapter 5 - Ice cream and crime, computing correlation coefficients; Chapter 15 - Cousins or just good friends, testing relationships using the correlation coefficient; Chapter 16 - Predicting who’ll win the super bowl, using linear regression; Chapter 18 – Some other (important) statistical procedures you should know about.

**Articles:**


**Class Exercise:** Interpreting results from Pearson correlation, and understanding studies that use prediction or odds analysis.

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**Quiz 7:**  
**BB Opens 8am – closes 11:59pm**

**Monday Section**  
4-14 to 4-18

**Thursday Section**  
4-17 to 4-21

**Saturday Section**  
4-19 to 4-23

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**Updated: 12.9.2014 Farber**
CLASS 14  TESTING FOR FREQUENCY BIVARIATE ASSOCIATION

Mo: 4-27  Last class - Logic of the chi-square test
Th:  4-30  Reading cross-break tables and percentages
         Interpreting Pearson Chi-square test results
         Magnitude of association

Required Reading:
         Salkind: Chapter 17 – Chi-square and some other nonparametric tests

Article:

Class Practice: Interpreting chi-square results

Quiz 9:  BB Opens 8am – closes 11:59pm
Monday Section  4-28 to 5-2
Thursday Section 5-1 to 5-5
Saturday Section 5-3 to 5-7

** DUE: Student Project – Upload scholarly paper to BB

** Student Project – Presentation - Final Exam Week (date provided by the university)

The End.  Thank You.